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Radon Gas: Ramifications for Real Estate Transactions in Pennsylvania

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Radon Gas: Ramifications for Real Estate Transactions in Pennsylvania

Concern over the presence of radon gas in homes is growing. Homeowners and environmental officials fear that the odorless, colorless gas[1] that is produced by nature may be accumulating in unsafe levels in homes across the nation.[2] At this point, relatively little is known about the problem.[3] Moreover, the legal ramifications of radon's effects in real estate transactions are uncertain.[4] In the next few years, it is likely that the law's relationship to the radon problem will be forcibly delineated. Present legal theories will be expanded and extrapolated[5] to answer the question of who should bear the risks of radon's contamination of a home.

This legal question is particularly acute in Pennsylvania. In December 1984, it was discovered that a home near Philadelphia had radon levels far above those ever discovered before.[6] Since that time, surveys conducted in Pennsylvania have indicated that radon levels in homes in the state are twice the national average.[7]

Although contaminated homes can be found throughout the state, the chief radon problem exists in the Reading Prong.[8] The Reading Prong is a granite formation that extends from Reading, Pennsylvania, through several New Jersey counties and into New York.[9] This granite formation contains large quantities of uranium,[10]

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1. UNITED STATES DEPARTMENT OF ENERGY, DOE/PE/72013-2, RADON IN THE HOME: A PRIMER FOR HOMEOWNERS 2 (1986) [hereinafter RADON IN THE HOME] (copy on file at the DICKINSON LAW REVIEW office); M. LAFAVORE, RADON: THE INVISIBLE THREAT, 21 (1987).

2. Nero, *The Indoor Radon Story*, TECH. REV., Jan. 1986, at 28 [hereinafter *The Indoor Radon Story*].

3. "Much of the country has not been surveyed at all, and the surveys that have been done usually involved relatively few houses." Smay, *Radon Exclusive*, POP. SCI., Nov. 1985, at 76, 78. The government also lacks the knowledge that is necessary to give specific advice to the public. N.Y. Times, Aug. 27, 1986, at A22, col. 1.

4. Galen, *Lawyers Grapple with the Radon Issue*, NAT'L. L.J., July 21, 1986; Sherman, *Radon Testing, Case Law Unclear*, N.J.L.J., May 22, 1986, at 22.

5. Galen, *supra* note 4, at 8.

6. The discovery of the Watras house in Boyertown, PA, is the most dramatic incident yet to occur in the recent awareness of the radon problem. The radon level in the Watras family home was discovered to be 100 times that allowed in uranium mines. Smay, *supra* note 3, at 77. The exposure suffered was equivalent to smoking 135 packs of cigarettes per day. Galen, *supra* note 4, at 1. This discovery touched off a new awareness and concern for the radon problem.

7. The Evening News (Harrisburg, PA) Sept. 26, 1986, at A1, col. 4. Pennsylvania has an average radon level of 6.9 picocuries per liter of air (pCi/l) in homes tested compared with a 3.4 pCi/l national average. *Id.* at A4, col. 1.

8. *Id.* at A1, col. 4.

9. Cohen, *Radon: Our Worst Radiation Hazard*, CONSUMER'S RESEARCH, April 1986, at

of which radon gas is a decay product.[11] As a result of this condition, sixty percent of the homes tested in the Reading Prong had radon levels above the Environmental Protection Agency safe standard guidelines.[12] Pennsylvania is therefore considered to have one of the country's greatest radon problems.[13]

In the future, Pennsylvania homeowners will turn to the legal system upon the purchase or lease of a home which proves to be contaminated with radon gas. Confronted with a newly purchased home which may be, in essence, uninhabitable, homeowners may seek rescission, damages for decreased value of a home or the cost of a remedial action, and damages for the increased risk of cancer and emotional distress which may be inherent in living in a radon-contaminated home. Although suits have been filed against contractors,[14] and more suits can be expected,[15] Pennsylvania appellate courts have not addressed the issue of a builder or vendor's liability for radon contamination of a home. Because of this risk, some builders are refusing to begin new housing projects in the Reading Prong.[16]

This Comment will address the question of radon's effect on liability stemming from real estate transactions. Although the courts have not addressed the radon issue, Pennsylvania law is clear in many areas regarding the duties and liabilities of builders and vendors of homes. This Comment will extrapolate traditional legal theories and examine their applicability to the Pennsylvania radon

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11, 13. Homes with 1,000-2,500 times the average radon level can be found within the Reading Prong. In some areas of the Prong, the risk of death from radon exposure is greater than the risk of death from riding in a car. *Id.*

10. Taylor, *Your House May be a Death Trap*, U.S. NEWS AND WORLD REP., Mar. 17, 1986, at 64.

11. *The Indoor Radon Story*, *supra* note 2, at 28. Uranium decays into radioactive radium. The radium in turn decays into radon gas which further breaks down into the radon daughter solids, which actually cause the health problems. *Id.* at 28-31.

12. New York Times, Aug. 15, 1986, at A8, col. 1. Of the 22,000 homes tested in the Reading Prong area, over 13,000 had radon levels in excess of 4 pCi/1. *Id.*

13. RADON IN THE HOME, *supra* note 1, at 17. Other states named in the study are Colorado, Florida, Idaho, Illinois, Maine, Maryland, Montana, New Jersey, New York, North Dakota, and Tennessee. While these states are reported to have higher than normal levels of radon, the pamphlet cautiously states that "virtually every state has areas of radon contamination." *Id.* (citing Dr. Bernard Cohen of the University of Pittsburgh).

14. Nobel v. Marvin E. Kanze, Inc., No. 83-05253 (C.P. Montg. Co., Pa. filed April 13, 1983).

15. Galen, *supra* note 4, at 8.

16. Interview with Thomas Gerusky, Director of the Bureau of Radiation Protection, Pennsylvania Department of Environmental Resources, in Harrisburg, PA (Oct. 6, 1986) [hereinafter Gerusky Interview]. It should be noted that Mr. Gerusky believes that providing positive reward for builders who produce radon safe homes is a more favorable alternative than builder liability.

situation.

The primary focus of liability against the builder will likely be the implied warranty of habitability,[17] and the Comment addresses this issue first. Pennsylvania has adopted a liberal theory of builder-vendor liability for new homes that are later determined to be defective.[18] Home buyers who discover radon contamination may use this theory to shift the burden of costs for remedial action to the party who sold the home.[19] The issue of a home seller's duty to disclose the presence of radon will also be examined. Pennsylvania courts have determined that when a latent defect exists, which may cause harm to a home purchaser, the vendor of the home must disclose that defect's presence.[20] In addition, this Comment will address the validity of disclaimers, inspection clauses, and statutes of limitations concerns.

I. Background on Radon

In order to discuss the issue of liability, some background on the nature of radon and the radon problem is necessary. Radon is an inert gas.[21] It is odorless and colorless and cannot be detected without the use of specialized devices.[22] Radon occurs naturally.[23] It is found in rock and soil formations and is a natural decay product of radioactive radium and uranium.[24] These two elements decay and produce radon gas. The gas then migrates through the soil, diffuses from the ground, and is released into the atmosphere.[25]

Radon can be found everywhere in the atmosphere.[26] Outside of buildings, however, radon is not found in high concentrations be-

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17. Galen, *supra* note 4; Sherman, *supra* note 4.

18. *See* Elderkin v. Gaster, 447 Pa. 118, 288 A.2d 771 (1972) (Pennsylvania Supreme Court held that a builder-vendor impliedly warrants the home sold to be reasonably fit for human habitation).

19. Galen, *supra* note 4, at 8.

20. *See* Long v. Brownstone Real Estate Co., 335 Pa. Super. 268, 484 A.2d 126 (1984); Quashnock v. Frost, 299 Pa. Super. 9, 445 A.2d 121 (1982); Shane v. Hoffman, 227 Pa. Super. 176, 324 A.2d 532 (1974).

21. *Calculating Homely Radon's Daughters*, SCI. NEWS, Jan. 18, 1986, at 43. Inert is defined as "having little or no ability to chemically react." THE RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE 728 (1967).

22. ENVIRONMENTAL PROTECTION AGENCY, OPA-86-004, A CITIZEN'S GUIDE TO RADON, at 5 (1986) (on file at DICKINSON LAW REVIEW Office) [hereinafter A CITIZEN'S GUIDE]. Two inexpensive techniques (charcoal canisters and alpha track detectors) are available commercially and are listed as "most popular" by the Environmental Protection Agency. *Id.*

23. *Id.* at 1.

24. *Id.*; LAFAVORE, *supra* note 1, at 20-21.

25. Murphy, *The Colorless, Odorless Killer*, TIME, July 22, 1985, at 72.

26. *The Indoor Radon Story*, *supra* note 2, at 28.

cause it quickly disperses.[27] As a result, outdoor radon poses few health problems. The problem occurs when radon reaches high concentrations in mines or indoor structures. A tightly sealed home can actually act as a container for radon.[28] As a result, radon levels in a home may increase to the point where severe adverse health consequences occur.

Two major factors determine the radon level of a given home.[29] First, the level of radon is inversely proportional to the ventilation rate of the building.[30] The more ventilation a building has, the less the gas can concentrate and the less chance radon will become a health problem. As a result of this factor, new, energy efficient homes have a greater potential for high radon levels than do older homes that are less air-tight.[31]

The influx rate, or source magnitude, of the gas entering the home[32] is the other major factor that contributes to high radon levels. While radon can enter the home from the outside air,[33] three other major sources of indoor radon exist. First, radon can seep into the home through cellar cracks, open crawl spaces, and ground openings for pipes and sump pumps.[34] Alternatively, the gas can be drawn through the porous foundation of a home by naturally occurring air flows within the house.[35] In Pennsylvania, particularly in the area of the Reading Prong, the soil is the major source of radon.[36] The radium deposits in the ground produce the gas which seeps into homes in the area.

The second source of radon in homes is from ground water.[37] The radon contaminates the water, and when the water is used in-

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27. Taylor, *supra* note 10, at 64.

28. Nero, *Indoor Radiation Exposures from Radon-222 and Its Daughters: A View of the Issue*, 45 HEALTH PHYS. 277, 278 (1983) [hereinafter *Indoor Radiation Exposures*].

29. *Id.* at 277-78.

30. Smay, *supra* note 3, at 79.

31. *Indoor Radiation Exposures, supra* note 28, at 280. In an energy efficient home, the radon rates can double during periods when the windows and doors are closed. *Id.* at 281.

32. *Id.* at 278.

33. RADON IN THE HOME, *supra* note 1, at 10.

34. A CITIZEN'S GUIDE, *supra* note 22, at 4.

35. LAFAVORE, *supra* note 1, at 39-40, 46. The natural air flow in the home is a complex pattern of pressure differences. With the basement being a low pressure area, the house actually draws the radon from the soil. *Id.*; *see also The Indoor Radon Story, supra* note 2, at 37-38.

36. Gerusky Interview, *supra* note 16.

37. *See generally* NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS, NCRP Report No. 77, EXPOSURES FROM THE URANIUM SERIES WITH EMPHASIS ON RADON AND ITS DAUGHTERS, at 52-54 (1984) [hereinafter EXPOSURES FROM THE URANIUM SERIES]; LAFAVORE, *supra* note 1, at 34-35.

side the home, the gas is released into the indoor atmosphere.[38] Contaminated water may also cause severe adverse health effects if consumed.[39]

Building materials constitute the third source of the gas.[40] Gypsum, brick, and concrete are all made from natural earthen materials and, as a result, all emit quantities of radon gas.[41] After the building materials are installed, the gas can diffuse into a home and cause or contribute to a radon problem.[42] An additional building material that can cause increased radon levels is the "fill" used to support the foundations of homes. If the fill contains byproducts of uranium production, known as mill tailings, the fill can emit large quantities of radon gas.[43]

While radon levels are difficult to measure with certainty, the Environmental Protection Agency has established guidelines on levels of radon in a home that are considered safe.[44] Levels of radon in a home are measured in terms of picocuries per liter of air (pCi/l). The Environmental Protection Agency standard has been set at 4 pCi/l.[45] At this level, homeowners should be aware of their potential for a radon problem. At higher levels, the Environmental Protection Agency recommends action, varying from temporary remedial action to relocation of residents depending upon the severity of the problem.[46]

Since radon is an inert gas, it does not react chemically with its surroundings. The gas can be inhaled and exhaled without harm to

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38. *See* BUREAU OF RADIATION PROTECTION, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES, RADON PROGRAM UPDATE, DRAFT TO RADON PROGRAM CONTROL DIRECTORS (August 31, 1986) (copy on file at the DICKINSON LAW REVIEW office). Radon is dissolved in cold water which can be brought into the home. When the water is aerated or heated, it releases the radon into the air. Activities that result in great amounts of aeration, such as showers and washing, cause greater amounts of radon to be released into the indoor atmosphere. *Id.*

39. Drinking radon water has been associated with leukemia. Smay, *supra* note 3, at 77. There is also a suggested link between the drinking of radon contaminated water and stomach cancer. RADON IN THE HOME, *supra* note 1, at 11.

40. *See generally* DEPARTMENT OF COMMERCE, N.B.S. TECH. NOTE 1139, RADON TRANSPORTATION THROUGH AND EXHALATION FROM BUILDING MATERIALS (1981).

41. UNITED STATES DEPARTMENT OF ENERGY COD-4546-2, MEASUREMENT OF RADON-227 BUILDUP IN SOLAR HEATED BUILDING AND CALCULATION OF FINAL DOSES, at 1 (1978); LAFAVORE, *supra* note 1, at 51-54.

42. UNITED STATES DEPARTMENT OF ENERGY, SYMPOSIUM, NATURAL RADIATION IN THE ENVIRONMENT III, V.2 at 1211.

43. *See* Cohen, *supra* note 9, at 12.

44. Rather than terming a certain radon level as an absolute "standard," the Environmental Protection Agency has established guideline levels with recommended action at certain levels of contamination. A CITIZEN'S GUIDE, *supra* note 22, at 11.

45. N.Y. Times, Aug. 15, 1986, at A8, col. 1.

46. *See supra* note 44, and accompanying text.

humans.[47] The problem comes from radon's decay products. Radon in the air decays into solid particles or "daughters."[48] These daughters become attached to smoke and dust particles and are inhaled.[49] They later become lodged in the lungs and continue their decay process, irradiating the tissue to which they are attached.[50] These damaged cells can develop into cancer.[51]

The extent of radon's health risk is great. It is believed that when more is known radon will be considered a greater health hazard than formaldehyde or even asbestos.[52] At the present time, radon is believed to be a major cause of lung cancer, second only to smoking.[53] Yet the health effects of the gas are not immediately apparent. Radon-induced cancers take at least seven years to develop,[54] and have an average latency period of twenty years.[55]

If a house is found to have a radon problem, the situation is not hopeless. There are several remedial measures which can alleviate or control the problem. Control of the ventilation rates or the source magnitudes can result in a previously contaminated house becoming safe. Steps recommended by the Environmental Protection Agency contemplate various means of ventilating the home: covering exposed earth, sealing cracks and openings in the basement, and ventilating the soil around the home to remove radon before it can enter the building.[56]

II. Implied Warranty

One theory that will be relied on by homeowners seeking recovery after the purchase of a radon-contaminated home will be the

47. *See Calculating Homely Radon's Daughters, supra* note 21, at 43.

48. For an excellent detailed description of radon's decay process and the human exposure which results, *see Calculating Homely Radon's Daughters, supra* note 21, at 43.

49. *Id.*

50. *Id.*

51. Ironically, although some would say pathetically, scientists appear to know even less about how radiation causes cancer than they generally know about the radon problem. The radon-cancer link is described as a "growing process gone berserk." RADON IN THE HOME, *supra* note 1, at 11.

52. Taylor, *supra* note 10, at 64. Since the circumstances of asbestos and formaldehyde, being airborne health risks, are similar to radon, comparisons are inevitable. As a consequence, this Comment will at times attempt to draw on precedents related to these two agents.

53. Galen, *supra* note 4, at 1.

54. NATIONAL COUNCIL ON RADIATION POLICY, RESPONSE TO FEDERAL REGISTER REQUEST OF JUNE 27, 1980, FOR PUBLIC COMMENT ON RADON IN INHABITED STRUCTURES, at 2.

55. Murphy, *supra* note 25, at 72.

56. ENVIRONMENTAL PROTECTION AGENCY, RADON REDUCTION METHODS: A HOMEOWNER'S GUIDE, at 4-17 (1980) [hereinafter RADON REDUCTION METHODS]. *See also* ENVIRONMENTAL PROTECTION AGENCY, EPA/625/5-86/019, RADON REDUCTION TECHNIQUES FOR DETACHED HOUSES (June 1986) [hereinafter RADON REDUCTION TECHNIQUES].

implied warranty of workmanlike construction and habitability.[57] Many states, including Pennsylvania, have adopted the theory that the seller of a home impliedly warrants that the home is built in a workmanlike manner and/or is reasonably fit for the purpose for which is was sold.[58] Homeowners faced with a radon problem could apply this theory and shift the burden of corrective measures, or liability for possible personal injury, to the seller or builder of a home.[59] They may assert that because of the radon contamination, the house if unfit for human habitation. Although in many instances the builder or vendor of the home would not have been aware of the problem, the implied warranty does not require a showing of fault.[60] Rather, it is based solely on the premise that, because the home cannot be lived in without serious adverse health consequences, it is not of the condition the seller represented it to be by holding it out as a dwelling. The issue in this matter is whether the theory will be expanded to cover natural environmental health threats of which the seller may have been unaware at the time of the construction.[61]

Prior to the adoption of the implied warranty doctrine, Pennsylvania, like other states, followed the doctrine of caveat emptor.[62] Caveat emptor — let the buyer beware — shielded the seller of real estate from liability for defects in the homes that he sold.[63] The doctrine presumed that the buyer could look out for himself by inspecting the home and insuring that it was suitable.[64]

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57. Galen, *supra* note 4; Sherman, *supra* note 4. Implied warranty is defined as "a promise arising by operation of law, that something which is sold shall be merchantable and fit for the purpose for which the seller has reason to know that it is required." BLACK'S LAW DICTIONARY 1423 (5th ed. 1979).

58. Shedd, *The Implied Warranty of Habitability: New Implications, New Applications*, 8 REAL EST. L.J. 291, 303-306 (1981). The following states have adopted some form of the implied warranty: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Washington, and Wyoming. The District of Columbia has also adopted the implied warranty. Georgia, Tennessee and Virginia have rejected the theory. The remaining ten states have yet to rule on the issue. *Id.*

59. Galen, *supra* note 4, at 1; Sherman, *supra* note 4, at 22.

60. Waggoner v. Midwestern Development, Inc., 83 S.D. 57, ____, 154 N.W.2d 803, 807 (1967); the seller is the insurer of the safety of the product, even though he exercised reasonable care. PROSSER AND KEETON, THE LAW OF TORTS § 97 at 690 (5th ed. 1984) [hereinafter PROSSER & KEETON ON TORTS].

61. Sherman, *supra* note 4, at 22.

62. *See* Wolf v. Christman, 202 Pa. 475, 51 A. 1102 (1902) (caveat emptor applies unless vendee obtains an express warranty); Pringle v. Rogers, 193 Pa. 94, 44 A. 275 (1899) (suit on grounds of land not conforming to deed is barred by caveat emptor).

63. For an excellent history of the doctrine of caveat emptor, see Hamilton, *The Ancient Maxim Caveat Emptor*, 40 YALE L.J. 1133 (1931).

64. *Id.* at 1135. Prior to modern times this assumption was reasonable. The home and

The problem came, however, with a revolution in the home building industry. After World War II, mass real estate developers, who sold the building and the land as a single package, became common.[65] Home buyers evolved into buyers of just another product. Still, courts were reluctant to overrule the long ingrained doctrine of caveat emptor.[66] As a result, buying a home became very much a high stakes game of chance.[67]

A gradual change occurred, however, and courts began to erode the common law doctrine when its harshness became apparent.[68] It was clear that the potential buyer had no way of knowing the nature and quality of the home he was purchasing. The builder, on the other hand, had his own architects and professional advisors who could examine the home and discover defects that would not be found by the limited inspection of the buyer.[69]

As a result, jurisdictions across the United States began to apply theories, similar to the theories applied to the sale of personal property, to the sale of real property. The rationale was the lack of any basis for distinguishing the sale of a home from that of any other product. Thus, in cases such as *Schipper v. Levitt & Sons, Inc.*[70] and *Waggoner v. Midwestern Development Inc.*,[71] state courts began determining that an implied warranty arose from the sale of a home by a builder-vendor. As in a contract for the sale of goods,[72]

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the land were not sold as one package; the home buyer hired a contractor and an architect to build the house. The home construction was therefore much more under the control of the buyer than it is today. Roberts, *The Case of the Unwary Home Buyer: The Housing Merchant Did It*, 52 CORNELL L.Q. 835, 837 (1967).

65. Bearman, *Caveat Emptor in Sales of Realty — Recent Assaults Upon the Rule*, 14 VAND. L. REV. 541, 542 (1961).

66. *Id.*

67. Hamilton, *supra* note 63, at 1187.

68. The first exception to caveat emptor in the sales of realty was the establishment of an implied warranty of workmanlike construction when a home was purchased in the course of construction. The exception was promulgated in England in Miller v. Cannon Hill Estates, Ltd., 2 K.B. 113 (1931), and adopted in the United States by Glisan v. Smolenske, 153 Colo. 274, 387 P.2d 260 (1963); Hoye v. Century Builders Inc., 52 Wash.2d 830, 329 P.2d 474 (1958). *See also* Vanderschrier v. Aaron, 103 Ohio App. 340, 140 N.E.2d 819 (1957); Shedd, *supra* note 58, at 293-95.

69. Annot, *Liability of Builder-Vendor or Other Vendor of New Dwelling for Loss, Injury, or Damage Occasioned by Defective Condition Thereof*, 25 A.L.R.3d 383, 392 (1977).

70. 44 N.J. 70, 207 A.2d 314 (1965) (breach of implied warranty when a water system provided water of an unsafe temperature).

71. 83 S.D. 57, 154 N.W.2d 803 (1967) (breach of implied warranty when water seeped into basement of a home).

72. Uniform Sales Act §§ 13-16; U.C.C. § 2-314 (1977) require that the goods are "merchantable" and would "pass without objection in the trade." Section 2-315 provides that the goods are impliedly warranted to be suited for the particular purpose for which it is intended. U.C.C. § 2-315 (1977). "Since the word 'goods,' as used in the Code, is limited to movable items at the time they are identified to the contract, the sale of real property is not covered by these implied warranties." Shedd, *supra* note 58, at 292 (footnote omitted).

the seller of a newly constructed home and the plot of land on which it is located holds himself out as having a special ability to provide a suitable dwelling.[73] There is, thus, an implied representation in the sale of a home that the home is built in a workmanlike manner and that it is reasonably suited for habitation.[74] When the vendee relies on this implied representation and the home is subsequently discovered to be defective, the vendee has a cause of action for damages against the builder-vendor.

The home builder or seller is not liable for all defects in a home. Whether or not a home is defective, and therefore breaches the warranty, is determined under a test of reasonableness.[75] In addition, most courts have "imposed a reasonableness standard for determining the warranty's duration."[76]

Following this trend, Pennsylvania has adopted a liberal view of the implied warranty of habitability. In the case of *Elderkin v. Gaster*,[77] the Pennsylvania Supreme Court established that in the sale of a new home by a builder-vendor, an implied warranty exists that the home was built in a workmanlike manner and is reasonably suited for human habitation.[78] In *Elderkin*, the purchasers of a home and lot brought suit against the builder-vendor of the home when their water supply was found to be unfit for human consumption. Both the home and the well which supplied the water were adequately constructed, but the source of the water was inadequate.[79]

The trial court held that there could be no recovery.[80] The court ruled that the implied warranty ran only to the adequacy and the workmanship of the construction, and not to latent defects which the builder was unable to control.[81] On appeal, however, the supreme

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73. *Waggoner*, 83 S.D. at ____, 154 N.W.2d at 807.

74. *Id.* at ____, 154 N.W.2d at 809; *Schipper*, 44 N.J. at 92, 207 A.2d at 326.

75. *Waggoner*, 83 S.D. at ____, 154 N.W.2d at 809; *Schipper*, 44 N.J. at 92, 207 A.2d at 326.

76. Note, *Another Look at the Implied Warranty of Habitability in North Carolina*, 64 N.C.L. REV. 869, 878 (1986).

77. 447 Pa. 118, 288 A.2d 771 (1972). The "builder-vendor" was defined by the *Elderkin* court as "one who buys land and builds a home upon that land for purposes of sale to the general public." *Id.* at 123, n.10, 288 A.2d at 774, n.10.

78. *Id.* at 119, 288 A.2d at 773. The plaintiffs alleged that the drinking water from the well contained pollutants and contaminants that made it "unfit for human consumption, [and] objectionable because of its toxic effects . . ." Brief for Appellant at 5, Elderkin v. Gaster, 447 Pa. 118, 288 A.2d 771 (1972). The supreme court held that the water supply was unfit for human consumption, and was thus defective. *Elderkin*, 447 Pa. at 119, 288 A.2d at 773.

79. Note, *Elderkin v. Gaster — The Pennsylvania Experience with Implied Warranties in Sales of New Homes*, 47 TEMP. L.Q. 172, 177 (1973) [hereinafter Note, *Elderkin v. Gaster*].

80. *Gaster v. Elderkin*, 56 Del. Co. 467, 50 Pa. D. & C.2d 222 (1969).

81. *Id.* at ____, 50 Pa. D. & C.2d at 227.

court reversed. In doing so, it adopted an implied warranty theory that was much more liberal than any other jurisdiction at the time.[82] Because the builder-vendor warranted the fitness of the premises, he could be held responsible for a breach of warranty not only when it was shown that his construction was faulty, but also when the inherent characteristics of the land somehow made the premises unfit.[83] Thus, the Pennsylvania Supreme Court held the builder-vendor in *Elderkin* to be liable for a breach of warranty when his properly constructed building could not provide water that was fit to drink, despite the fact that he had little control or knowledge of the condition of the subsurface water.[84] The decision has been viewed as coming very close to making the seller of a home the insurer of that home's quality, and it has been thus criticized.[85]

Under this liberal view of the implied warranty theory, there could possibly be liability on the part of a builder-vendor of a home which is contaminated by radon gas. Unfortunately, such a ruling could be viewed as unduly harsh. Until very recently, neither home buyers nor home sellers knew of the depth and nature of the radon problem.[86] The implied warranty of *Elderkin* does not base liability on fault, and the theory has been criticized for this reason.[87] In fact, some jurisdictions have limited the warranty only to the quality of workmanship to ensure freedom from defective construction.[88] A warranty that the premises are "habitable" has not been implied in these jurisdictions because the courts recognized that this would go too far in making the builder strictly liable for defects, and it would

82. The rationale given for this decision was that the vendor and purchaser were not on an even plane as far as bargaining power was concerned. The transaction was no longer viewed as one which was carried on at arms length. In addition, the builder-vendor should be liable for latent defects in the site because he chose the site and because he held himself out as being capable of choosing a suitable site. *Elderkin*, 447 Pa. at 129-30, 288 A.2d at 777.

83. Note, *Elderkin v. Gaster*, *supra* note 79, at 178.

84. *Id.*

85. *Id*; Note, *Vendor and Purchaser — Abrogation of Caveat Emptor in New Home Sales by Builder-Vendors*, 7 U. RICH. L. REV. 399, 403-404 (1972) [hereinafter Note, *Vendor and Purchaser*].

86. Gerusky Interview, *supra* note 16.

87. *See* Note, *Vendor and Purchaser*, *supra* note 85. "Thus the builder-vendor [in *Elderkin*] was held to warrant the quality of the subsurface water over which he had no control under normal circumstances. While it is desirable that the vendee be protected in his bargain, by this application the builder-vendor becomes an insurer of the land he sells as well as the house he builds . . . . If an implied warranty is adopted to the injury of the builder-vendor, then the rationale for the warranty has been completely overlooked . . . ." *Id.* at 403.

88. *See* Hartley v. Ballou, 286 N.C. 51, 209 S.E.2d 776 (1974) (warranty of being free from structural defects and constructed in a workmanlike manner); Crawley v. Terhune, 437 S.W.2d 743 (Ky. 1969) (construction in a workmanlike manner and use of suitable materials); Mitchem v. Johnson, 7 Ohio St.2d 66, 218 N.E.2d 594 (1966) (home warranted only to have been constructed in a workmanlike manner).

be too great of a hardship on the builder.[89]

Therefore, to a degree, the level of fault on the part of the supplier of homes is considered when the nature and extent of implied warranties are delineated by the courts. A court, even in a jurisdiction with a liberal implied warranty of habitability such as Pennsylvania, will probably consider the degree of fault[90] on the part of the builder when determining whether the implied warranty should include the duty to sell a home which has safe levels of radon gas. For purposes of analysis, it may therefore be helpful to divide radon contaminated homes into two categories, based on differing levels of fault on the part of the builder-vendor: A) homes which have radon problems due to structural defects in their construction; B) homes which are built in a workmanlike manner and are structurally sound but, because of high natural source strengths, have unsafe levels of radon gas.

A. Homes with Structural Defects that Cause Radon Problems

The implied warranty of workmanship set out in *Elderkin* will likely lead to liability of the builder-vendor for radon contamination when this condition is caused by defective construction of the home. Although poor workmanship in itself will not result in a radon problem, since some natural source strength of the gas is necessary, several structural flaws can contribute to high radon levels.[91] If the buyer can establish a causal relationship between the structural defect and the radon problem, recovery would seem logical.[92] A major defect connected with high levels of radon gas is openings in the foundation that allow the gas to enter from the soil.[93] Structural flaws, such as cracks and other openings in the foundation increase radon entry points, and thus, radon levels in the home.[94] Large gaps

89. *See generally*, Note, *Extension of Implied Warranties to Subsequent Purchasers of Real Property: Insurance Company of North America v. Bonnie Built Homes*, 43 OHIO ST. L.J. 951, 953-958 (1982) (discussing Mitchem v. Johnson and the rejection of the warranty of fitness) [hereinafter Note, *Extension of Implied Warranties*].

90. The term "fault" is used reluctantly for want of a better term. For this Comment's purposes, it signifies poor workmanship or the lack of care and judgment on the part of a builder which may result in the home having an increased susceptibility to radon contamination.

91. *See infra* notes 93-96.

92. The *Elderkin* decision pointed out that the habitability of the premises in connection with the reasonable workmanship must be determined on a case by case basis. 447 Pa. at 126-127 n.13, 288 A.2d at 776 n.13. Experts and testing devices could be used to determine the causal relationship between the defect and the inflow of radon.

93. *See* EPA, *supra* note 22, at 4; Murphy, *supra* note 25 at 72; Nero, *supra* note 2, diagram at 29.

94. This can be deduced from the fact that the cracks and joints form a point of entry,

or inadequate sealing around pipes and sump pumps also allow radon to migrate indoors.[95] Additionally, an inadequate thickness of concrete block or slab in the basement can cause natural air currents to draw greater amounts of radon through the basement floors.[96] Although the builder-vendor may not have known of the radon problem, it can still be established that the building was not constructed within community standards,[97] and thus the home breaches the implied warranty. A link between the defect and the entry of gas would be the only remaining question.

Such a scenario is readily analogous to the Pennsylvania cases finding a breach of the implied warranty of workmanship. These cases tend to focus not on the builder-vendor's understanding or ability to predict that damage will occur. Rather, the key factor is the builder's failure to construct the home in a workmanlike manner.[98] Thus, liability has been found when a sewage system proved inadequate to handle sewage,[99] the drainage of a crawl space proved to be inadequate,[100] a gymnasium roof collapsed,[101] and when the granite walls of a bank slipped loose.[102]

In the radon situation, the fact that the builder-vendor has been unable to foresee that a dangerous radon situation would occur should be of little relevance. The main factor considered should be that the homeowner bargained for a workmanlike home and impliedly relied on the skill of the builder.[103] Instead the homeowner received a home which was defectively constructed, and consequently contains a serious health hazard. Although primitive, an analogy will inevitably be drawn with the cases allowing recovery when cracks in a foundation leak and cause flooding problems.[104] In both cases, the

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and because sealing cracks and openings is a recommended remedy for a radon problem. *See generally*, A CITIZEN'S GUIDE, *supra* note 22; RADON IN THE HOME, *supra* note 1; RADON REDUCTION TECHNIQUES, *supra* note 56; RADON REDUCTION METHODS, *supra* note 56.

95. *See supra* note 93.

96. Gerusky Interview, *supra* note 16.

97. The *Elderkin* case established that "community standards" are to be used to determine whether or not the home is built in a workmanlike manner. 447 Pa. at 128, 288 A.2d at 777.

98. *See supra* note 111.

99. Irwin v. Dorman, 87 York 134, 63 Pa. D. & C.2d 118 (1973).

100. Tyus v. Resta, 328 Pa. Super. 11, 476 A.2d 427 (1984).

101. Sports Management Group, Inc. v. Allensville Planing Mill, Inc., 16 Pa. D. & C.3d 760 (C.P. Mifflin Co. 1980).

102. Pittsburgh Nat'l Bank v. Welton Beckett Assoc., 601 F. Supp. 887 (W.D. Pa. 1985).

103. The *Elderkin* decision stated: "[O]ne who purchases a development house . . . relies on the skill of the developer that the house will be a suitable living unit." 447 Pa. at 128, 228 A.2d at 776.

104. *See* Elmore v. Blume, 31 Ill. App.3d 643, 334 N.E.2d 431 (1975); Wawak v. Stew-

defective construction of the home has allowed a natural condition to make the home uninhabitable.

The implied warranty theory was relied upon in *Nobel v. Marvin E. Kanze.*[105] In *Nobel*, a homeowner sued a construction firm for providing his home with an air conditioning-heating unit which caused his home to have a radon problem.[106] The complaint alleged a breach of an implied warranty because the air conditioning unit, located beneath the basement subslab of the home, had leaks in its vents and ducts causing high amounts of radon gas to accumulate in the suburban Philadelphia home.[107] The complaint sought damages for repairs to the home, for the increased risk of cancer faced by the home's residents, and the severe emotional distress and inconvenience suffered by the residents in having to ventilate the home with open windows.[108]

Although the case did not involve an implied warranty in the builder-vendor situation,[109] it is exemplary of the ready adaptability of the implied warranty of workmanship to the radon problem. If a structural defect which causes a radon problem can be found, it is likely that a homeowner may use such a theory of recovery against a builder-vendor. The plaintiff, however, must properly plead and establish the defect, in the form of a structural flaw, before a breach of the implied warranty of workmanship may be established.[110]

Two factors lead to the conclusion that the lack of foreseeability of the radon contamination would not be an impediment to finding a breach of the implied warranty once it has been determined that the home had been defectively constructed. First, in *Elderkin*, and the subsequent cases which followed it, the element of foreseeability was conspicuously absent.[111] In fact, by its nature, *Elderkin* dealt with

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art, 247 Ark. 1093, 449 S.W.2d 922 (1970); Waggoner v. Midwestern Development, Inc., 83 S.D. 57, 154 N.W.2d 803 (1967); Bethlahmy v. Bechtel, 91 Idaho 55, 415 P.2d 698 (1966); Weck v. A:M Sunrise Construction Co., 36 Ill. App.2d 383, 184 N.E.2d 728 (1962).

105. No. 83-05253 (Montgomery Co., PA, C.C.P. Civ. Div. filed April 13, 1983) (cited in Galen, *supra* note 4, at 8).

106. It was complained that the levels of radon in the Nobel's home exceeded 50 pCi/l, over twelve times the E.P.A. recommended guideline level of 4 pCi/l. Complaint filed April 13, 1983, Nobel v. Marvin E. Kanze, Inc., No. 83-05253, at 3-4.

107. *Id.* at 4.

108. *Id.* at 5-6.

109. The *Nobel* case is one in which the homebuyer, rather than suing the person who built the home itself, sued a components' supplier on an implied warranty of a product theory.

110. The complaint must allege more than general carelessness of construction. A mere assertion that a warranty has been breached is not adequate. The complaint must specifically plead the defect with precision. Skretvedt v. The Maple Corp., 62 Del. Co. 86, 72 Pa. D. & C.2d 637 (1974).

111. *See* Elderkin v. Gaster, 447 Pa. 118, 288 A.2d 771 (1972); Tyus v. Resta, 328 Pa. Super. 11, 476 A.2d 427 (1984); Sports Management Group, Inc. v. Allensville Planing Mill,

an unknown and undiscoverable defect that was outside the builder-vendor's control. Further, products liability cases, from which implied warranty theory is borrowed,[112] have held that foreseeability of the particular type of harm is not required.[113] The seller must only foresee that some harm could result if the product is defectively constructed. In the radon application; the builder-vendor could foresee that if the home is structurally defective, some damage could occur. How that harm or damage comes about, or what particular factor causes the harm, would be irrelevant.[114]

Other defects caused by failure to construct in a workmanlike manner could possibly be found when, in light of increased knowledge of the radon problem,[115] a builder of a home uses construction methods or materials which could cause or aggravate a radon problem. Excessive use of building materials that emit radon gas[116] could aggravate a radon problem in radon prone areas.[117] In addition, constructing a home with large surface areas in contact with the soil could also enhance a radon problem.[118] A more blatant construction defect may be found when uranium mill tailings are used as fill around a home, as has happened in one area of Pennsylvania.[119]

A builder must use ordinary care in the construction, planning

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Inc., 16 Pa. D. & C.3d 760 (C.P. Mifflin Co. 1980); Irwin v. Dorman, 87 York 134, 63 Pa. D. & C.2d 118 (1973); Pittsburgh Nat'l Bank v. Welton Becket Assoc., 601 F. Supp. 887 (W.D. Pa. 1985).

112. The liability of the builder vendor is directly drawn from the analogy with chattels. PROSSER & KEETON ON TORTS, *supra* note 60, § 104A at 721.

113. *See* Eshbach v. W.T. Grant, Co., 481 F.2d 940 (3d Cir. 1973) (construing Pennsylvania products liability law). *See also* Blackurn v. Johnson Chemical Co., Inc., 128 Misc.2d 623, 490 N.Y.S.2d 452 (1985); Elmore v. Owens-Illinois, Inc., 673 S.W.2d 434 (Mo. 1985); *cf.* Crocker v. Winthrop Laboratories, Division of Sterling Drug, Inc., 514 S.W.2d 429 (Tex. 1974).

114. Eshbach v. W.T. Grant, Co., 481 F.2d at 943. "The fact that the [seller] could not foresee the particular manner in which the harm has occurred is immaterial." *Id.* (citing Diakolios v. Sears, Roebuck & Co., 387 Pa. 184, 127 A.2d 603 (1956); Vereb v. Markowitz, 379 Pa. 344, 108 A.2d 774 (1954)).

115. Circumstances of construction with knowledge of the radon problem must be distinguished from those in which the radon problem was unknown. It would seem logical that the duty of workmanlike construction can only be breached by using these building methods when the builder knew or should have known of the radon problem. If the radon problem was unknown at the time of construction, and the house is otherwise constructed in a satisfactory way, the use of building methods or materials which aggravate the radon problem is better left to strict liability in warranty or tort discussed in this Comment.

116. LAFAVORE, *supra* note 1, at 51.

117. "Radon prone" areas is a general term and must be tempered by the fact that even in "radon prone" areas such as the Reading Prong, one house may have an extreme radon problem while the house next to it may be totally radon-free. Smay, *supra* note 3, at 79.

118. Gerusky Interview, *supra* note 16.

119. In Canonsburg, Pennsylvania, the Department of Energy and the Pennsylvania Department of Environmental Resources are presently undergoing a $30 million clean-up project for uranium mill tailings in and around the town. *Id.*

and choosing of a site for a home in order to meet the implied warranty of workmanlike construction.[120] Under the *Elderkin* decision, this would be measured by the standards of the community.[121] If, given the present knowledge of the radon problem, a reasonable builder did not use certain building methods or materials when constructing a home in a radon prone area, it may be seen as a breach of workmanlike construction — and thus a breach of the implied warranty espoused in *Elderkin.*

This theory is consistent with present implied warranty applications. A breach of implied warranty has been found when a home is not built in a way that will withstand the natural conditions of an area.[122] For example, many cases have held that construction and planning of a home must take into account the latent soil conditions of a plot of land.[123] Thus, when a builder impliedly promises to construct in a workmanlike manner, it seems that this responsibility would include building a home which would not aggravate an existing natural health hazard such as radon.

The supplying of building materials that emit radon gas is also directly analogous to other Pennsylvania decisions which hold the

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120. *See* Note, *Extension of Implied Warranties, supra* note 89, at 958.

> A builder is held to a standard of ordinary care except "in the case of an extraordinarily hazardous transaction." Ordinary care refers to the degree of care that would be exercised by the average builder. The builder must exercise such care in the construction of the home and in his choice of the materials and site for the home. Thus, if the average builder conducts soil tests before choosing a site, the defendant builder must act accordingly; if he does not, he has constructed the house in an unworkmanlike fashion, and the homeowner should be able to maintain an action against him . . . .
>
> In assessing whether the construction has been done in an unworkmanlike fashion, the court must look at two categories: the physical work, and the planning and selection of sites and materials. One consideration in determining what constitutes unworkmanlike construction in both categories is the standard of quality required by usage of trade: what techniques and types of materials would the average builder use in this situation? If the builder uses the techniques and materials prescribed by the industry standard, the builder apparently has met the duties of workmanlike construction and ordinary care.

Id. (footnotes omitted).

121. *Elderkin*, 447 Pa. at 128, 288 A.2d at 777; Tyus v. Resta, 328 Pa. Super. 11, 19, 476 A.2d 427, 431 (1984).

122. "The primary function of a new home is to shelter its inhabitants from the elements. If a new home does not keep out the elements because of a substantial defect of construction, such a home is not habitable within the meaning of the implied warranty of habitability." Morrissy, *The Implied Warranty of Habitability: Step Toward Protecting Home Buyers*, 23 TRIAL L.J. 137, 148 (1979) (citing Goggin v. Fox Valley Construction Corp., 48 Ill. App.3d 103, 365 N.E.2d 509 (1977)); *see also* Hartley v. Ballou, 286 N.C. 51, 209 S.E.2d 776 (1974) (a home must be constructed in accordance with workmanlike standards for the area).

123. *See* Duncan v. Schuster-Graham Homes, Inc., 194 Colo. 441, 578 P.2d 637 (1978); House v. Thornton, 76 Wash.2d 428, 457 P.2d 199 (1969); Glisan v. Smolenske, 153 Colo. 274, 387 P.2d 260 (1963).

builder-vendor liable for constructing a home with potentially hazardous materials.[124] While these cases did not deal with the implied warranty theory, they do point out the obligation of the builder to construct the home with building materials which will be safe to its inhabitants.

A severe problem would occur, however, because of the fact that it still must be shown that the excess use of the building materials was not in line with community standards. In the present state of information, builders in many circumstances would be unable to tell what building methods are reasonable. Further, use of these building materials is always necessary in a home to a certain extent. Therefore, it would be difficult to prove a failure to follow what would be determined as reasonable community standards.

B. Liability for the Sale of a Properly Constructed Home which has a Radon Problem

Liability could also be found in the absence of any fault or knowledge on the part of the builder-vendor. The *Elderkin* case has established, in essence, strict liability in warranty.[125] In *Elderkin*, the liability of the defendants was not based on the fact that the builder had acted in an unworkmanlike or inadequate manner.[126] Rather, the liability was based solely on the relationship between the parties and the failure of the builder-vendor to deliver premises that were fit for habitation. The court stated:

> Not only does a housing developer hold himself out as having the necessary expertise with which to produce an adequate dwelling, but he has by far the better opportunity to examine the suitability of the home site and to determine what measures should be taken to provide a home fit for habitation. As between the builder-vendor and the vendee, the position of the former, even though he exercises reasonable care, dictates that he bear the risk that a home which he has built will be functional and habitable in accordance with contemporary community

124. *See* Pearl v. Allied Corp., 566 F. Supp. 400 (E.D. Pa. 1983) (formaldehyde insulation); Philadelphia v. Page, 363 F. Supp. 148 (E.D. Pa. 1973) (lead based paint). *See also* County of Johnson Bd. of Educ. v. United States Gypsum Co., 580 F. Supp. 284 (E.D. Tenn. 1984) (asbestos); Blagg v. Fred Hunt Co., Inc., 272 Ark. 185, 612 S.W.2d 321 (1981) (formaldehyde carpeting).

125. Prosser treats the implied warranty of habitability and strict liability in warranty as one in the same. He does, however, point out that strict liability in warranty and strict liability in tort differ in that the warranty arises from an implied representation by way of a guarantee while the strict liability in tort arises from the public policy goals of trying to prevent defects. PROSSER & KEETON ON TORTS, *supra* note 60, § 95A at 680.

126. *Elderkin*, 447 Pa. at 119, 288 A.2d at 773.

standards.[127]

Therefore, under the *Elderkin* theory, any condition that makes the premises uninhabitable could be seen as a breach of warranty.[128] One commentator felt that the *Elderkin* scenario was unique, and that the extent of its warranty would be overshadowed by the basic implied warranty of workmanship.[129] Applied to the radon scenario, however, it would seem to imply that a builder-vendor could be held liable for delivering to the purchaser a home that was defective due to high levels of radon contamination.[130]

In spite of the Pennsylvania Supreme Court's strong language, it is quite possible that the Pennsylvania courts will carve an exception in the warranty of habitability for properly built homes which were sold prior to the increased knowledge of the radon problem.[131] In the case of the vendor who built in a workmanlike manner and did not have notice to test or take steps to prevent radon gas contamination, the results of a strict warranty application would seem unduly harsh. Aside from the inequities involved in holding a completely innocent individual liable, the economic costs for the building industry could be great. Because of the cost of remedial actions, the potential liability for physical injury damages, and the extent of the Pennsylvania radon problem, the builder's liability could run into unjustifiably large sums.

For homes sold after the revelation of the radon problem, however, public policy demands that builder-vendor liability attach. With knowledge of the radon problem, radon in the construction of a new home becomes similar to any other latent defect. The rationale of the implied warranty applies.[132] The builder-vendor stands in a

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127. *Id.* at 128, 288 A.2d at 776-777.

128.

> The importance of *Elderkin* is that the defect, an impure water supply, was not in the buildings and furnishings ordinarily associated with the builder's liability, but rather in the condition of the land itself. Thus, the builder-vendor was held to warrant the quality of the subsurface water over which he had no control under normal circumstances.

Note, *Vendor and Purchaser, supra* note 85, at 403. To contrast the *Elderkin* decision with a narrower holding on a contaminated well, see Jeanguenat v. Jackie Homes Construction Co., 576 P.2d 761 (Okla. 1978).

129. Note, *Elderkin v. Gaster, supra* note 79, at 178.

130. In the case of radon-contaminated well water coming into the house, it would appear that the *Elderkin* case is on all fours.

131. Such increased knowledge in Pennsylvania could be seen to begin after the discovery and publicization of the Watras house in December of 1984. *See supra* note 6.

132. The rationale for strict liability, both in warranty and tort, is outlined excellently in Note, *Liability of Builder-Vendor: Blagg v. Fred Hunt Co.*, 35 ARK. L. REV. 654 (1982).

> First, the public interest in human life, health and safety demands protection against defects caused by the home builder. This protection is maximized by

better position to test for radon[133] and to take remedial or pre-construction steps to prevent radon from becoming a problem in a home. While this may seem harsh on the builder-vendor, the converse would be a greater hardship on the buyer; the buyer is the party least able to inspect the home and least able to spread the costs of radon protection across society.[134]

Further, builder-vendor liability under an implied warranty is justifiable on two basic factors. First, the cost of taking steps to lower radon levels in the course of construction is much less expensive than taking those same measures once the home is built.[135] Therefore, holding the builder liable would place the burden of preventative measures on the individual who can undertake these measures at the least cost. This additional cost could be passed on to purchasers in the sale of the home. Second, because radon has severe adverse health effects, society should place the burden where the least human exposure would result. Requiring builders to take preventative steps during the course of construction would result in less total exposure of home residents to radon gas.

Even under a strict warranty theory, the buyer may recover only when some defect in the home can be shown.[136] In the case of a breach of the implied warranty of workmanship, the defect would be

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making the builder-vendor responsible for the defects since the seller is in the best position to eliminate defects. Expanding strict liability increases the incentive for the contractor to build the house safely, because he can anticipate that if the work is defectively performed liability will result. Second, the buyer of a home, whether it be new or used, relies on the builder-vendor's implied representations that the house is sound. The vendor is an expert in the building profession, while the buyer usually is not. With today's complicated housing construction, the builder is the person with the expertise to recognize potentially dangerous conditions. Third, if the builder-vendor is a mass producer of houses, he can distribute the loss among all customers instead of having the burden fall only on the one injured. If the builder-vendor is not a mass producer of homes, there are fewer consumers to distribute the loss among and he cannot survive any large judgment because his profits may not be large. The smaller builder-vendors can, however, purchase liability insurance and distribute the cost of the premiums to their customers. Fourth, the courts in products liability cases allowed recovery under the strict liability statute because of a policy to reduce litigation.

Id. (footnotes omitted).

133. *See* LAFAVORE, *supra* note 1, at 122-23. Although there is no "fool proof" way to predict whether or not a given homesite will have a radon problem prior to home construction, various "crude methods" for detecting a possible problem have been suggested. *Id.*; *see also* EXPOSURE FROM THE URANIUM SERIES, *supra* note 37, at 91.

134. Haskell, *The Case For an Implied Warranty of Habitability*, 53 GEO. L.J. 633, 653 (1965).

135. Gerusky Interview, *supra* note 16; "Radon-proofing a home as it is being constructed is almost always cheaper and less complicated than having to go back and do the job once the home is completed." LAFAVORE, *supra* note 1, at 122.

136. *See supra* note 112 and accompanying text.

a physical flaw in construction which results in excess radon levels. In the case of a breach of implied warranty of habitability, however, the defect would be the presence of radon gas to the extent that the premises are not safely habitable. The radon gas itself would constitute the defect just as the unpotable water constituted the defect in *Elderkin.*

In order to recover under an implied warranty theory, the defect complained of must be latent.[137] With radon, this latency could easily be shown. Since radon cannot be detected absent special devices, the dangerous condition of the premises could not be discovered under the reasonable inspection required under Pennsylvania's implied warranty law.[138] Due to the inability of the home buyer to detect radon gas, the burden would fall on the builder-vendor who would have greater opportunities and resources to make a test and perform corrective measures.

The mere presence of the gas, however, would not constitute a defect. The builder-vendor is not required to deliver a perfect house — only one that is reasonably suited for habitability.[139] In the case of a house built in a workmanlike manner, but having a radon problem, the court would be forced to determine whether or not the premises are reasonably habitable. For this purpose, radon safety guidelines established by the Environmental Protection Agency and the Pennsylvania Department of Environmental Resources could be utilized to determine whether the house is within safe radon levels or

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137. Tyus v. Resta, 328 Pa. Super. 11, 476 A.2d at 432 (citing LeDonne v. Kessler, 256 Pa. Super. 280, 389 A.2d 1123 (1978)).

138. Tyus v. Resta, 328 Pa. Super. at 22, 476 A.2d at 433 stated: "A reasonable prepurchase inspection requires examination of the premises by the intended purchaser — not by an expert. Defects which would not be apparent to an ordinary purchaser as a result of a reasonable inspection constitute latent defects covered by the implied warranties." (citing Raab v. Beatty, 96 Pa. Super. 574 (1929) and Stewart v. Trimble, 15 Pa. Super. 513 (1901)).

139. *Elderkin*, 447 Pa. at 126 n.13, 288 A.2d at 776 n.13. *Accord*, Waggoner v. Midwestern Development, Inc., 83 S.D. 57, 154 N.W.2d 803 (1967); Bethlahmy v. Bechtel, 91 Idaho 55, 415 P.2d 698 (1966); Schipper v. Levitt & Sons, 44 N.J. 70, 207 A.2d 314 (1965). *See also, e.g.*, Gallagher v. White Rock, Inc., 21 Pa. D & C.3d 106 (Frank. Co. 1980) where the Franklin County Court of Common Pleas held that:

> Habitability is a term difficult of precise definition. Every minor defect in a new home does not necessarily make the structure uninhabitable. On the other hand, the warranty should not be defined in such strict terms as to require the defect to be of such magnitude as to require that the structure be deemed unlivable. Thus, we are required to look at each situation and to analyze the extent, or magnitude, of the defect and determine whether it resulted in unsuitability for habitation . . . . Whether or not a particular defect renders the dwelling 'unsuitable' necessarily requires inquiry as to whether a reasonable person faced with such a defect would be warranted in concluding that a major impediment to habitation existed.

Id. at 108-109 (quoting Banville v. Huckins, 407 A.2d 294 (Me. 1979)).

whether it constitutes a health hazard. Although these guidelines may seem arbitrary, given our limited knowledge of the radon problem,[140] and although some have criticized them as being overly cautious,[141] they do provide the court with a standard to utilize. It is therefore likely that these standards would be used by a court to determine the existence of a breach of the warranty of habitability.[142]

It must be noted that Pennsylvania also seems to be on the verge of viewing a newly constructed home as a "product" governed by product liability law. Strict liability in tort could attach to builder-vendors. Because mass production of new homes is closely akin to the manufacture of any other product, many jurisdictions have held that tort products liability theory applies.[143]

Pennsylvania has adopted the strict liability theory of § 402A of the Restatement (Second) of Torts.[144] Although the section has traditionally been held not to apply to real estate transactions in the state,[145] this notion is under increasing attack given the modern trend of products liability application to the sale of new homes.

In *Sports Management Group Inc. v. Allensville Planing Mill, Inc.*,[146] the Court of Common Pleas of Mifflin County held that a claim could possibly be made under § 402A by a buyer of a defective building. Citing a New Jersey Superior Court decision,[147] the court stated that "some doubt is cast upon the continued viability" of a finding that a new house is not a product.[148] The theory of products liability could apply when the land and the house are sold together by a builder-vendor.

The adoption of § 402A, as applied to the sale of a new home,

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140. The Evening News (Harrisburg, PA) Sept. 26, 1986, at C1, col. 3 (quoting Thomas Gerusky).

141. N.Y. Times, Aug. 15, 1986, at A8, col. 1.

142. In the *Nobel* complaint, the plaintiffs used the 4 pCi/l standard to determine the defect. Complaint filed April 13, 1983, Nobel v. Marvin E. Kanze, Inc., No. 83-05253 (Montgomery Co., PA, C.C.P. Civ. Div.).

143. *See generally* Annot. *Recovery, Under Strict Liability in Tort, For Injury or Damage caused by Defects in Building or Land*, 25 ALR 4th 351 (1983). For cases applying strict liability in tort, *see* Blagg v. Fred Hunt Co., Inc., 272 Ark. 185, 612 S.W.2d 321 (1981); Patitucci v. Drelich, 153 N.J. Super. 177, 379 A.2d 297 (1977); Smith v. Old Warson Development Co., 479 S.W.2d 795 (Mo. 1972); Kriegler v. Eichler Homes, Inc., 269 Cal. App.2d 224, 74 Cal. Rptr. 749 (1969).

144. *See* Webb v. Zern, 422 Pa. 424, 220 A.2d 853 (1966); Miller v. Preitz, 422 Pa. 383, 221 A.2d 320 (1966).

145. *See* Cox v. Schaffer, 223 Pa. Super. 429, 301 A.2d 456 (1973) (refusal to apply § 402A to the building of a silo).

146. 16 Pa. D. & C.3d 760 (C.P. Mifflin Co. 1980).

147. Patitucci v. Drelich, 153 N.J. Super. 177, 379 A.2d 297 (1977).

148. *Sports Management*, 16 Pa. D. & C.3d at 768.

could have major implications for the radon situation. If the new home is seen as a product, the builder-vendor could be held responsible even though he has used the highest degree of care.[149] This tort liability would seem even broader than the strict warranty liability put forth in *Elderkin*. Additionally, the option to use a tort theory rather than a contract theory would probably result in greater liability for the physical harms caused by radon exposure to buyers of homes.[150]

C. *Scope of Liability*

The builder-vendor's liability could possibly extend beyond the immediate purchaser of the home. Lower courts in Pennsylvania appear to have abrogated the contractual privity requirement[151] of an implied warranty. Two 1974 Pennsylvania Common Pleas cases, *Spencer v. Firanski & Son*[152] and *Skreveldt v. The Maple Corp.*,[153] held that the buyer of a home was allowed to sue the builder-vendor of that home for a breach of warranty in spite of the fact that the parties maintained no contractual relationship.[154] By so holding, Pennsylvania appears to have joined the growing number of jurisdic-

149. RESTATEMENT (SECOND) OF TORTS § 402A, comment a (1965).

150. Strict liability in tort is usually used to recover for physical injury while strict liability for contractual warranty is used to recovery economic loss. PROSSER & KEETON ON TORTS, *supra* note 60, § 95A, at 680. Although § 402A would seem applicable only to physical harm, courts have allowed recovery for the defect. *See* Blagg v. Fred Hunt Co., Inc., 272 Ark. 185, 612 S.W.2d 321 (1981); Patitucci v. Drelich, 153 N.J. Super. 177, 379 A.2d 297 (1977) (defective sewage disposal); Smith v. Old Warson Development Co., 479 S.W.2d 795 (Mo. 1972) (sinking foundation). *But cf.* Pennsylvania Glass Sand Corp. v. Caterpillar Tractor Co., 496 F. Supp. 712 (M.D. Pa. 1980) (in Pennsylvania, an action for damages is limited to damages occurring to the defective product). *See also generally Torts — Strict Liability — Under Pennsylvania Law Damages Solely to a Defective Product Itself are Recoverable Under Section 402A*, 27 VILL. L. REV. 836 (1972).

151. "Contractual Privity" is defined as "[t]hat connection or relationship which exists between two or more contracting parties. It was traditionally essential to the maintenance of an action on any contract that there should subsist such privity between the plaintiff and defendant in respect of the matter sued on." BLACK'S LAW DICTIONARY 1079 (5th ed. 1979).

152. 55 Wash. Co. Rep. 7, 67 Pa. D. & C.2d 235 (1974).

153. 62 Del. Co. 86, 72 Pa. D & C.2d 637 (1974) (holding that purchase and sale by realtor did not prevent subsequent buyer from suing under implied warranty).

154. In *Spencer*, the court stated:

> Our courts have determined that a manufacturer by marketing and advertising his product impliedly represents that it is safe for its intended use. We have decided that no current societal interest is served by permitting the manufacturer to place a defective article in the stream of commerce and then to avoid responsibility for damages caused by the defect.
>
> Should the builder of a home be in any different position from a manufacturer? We think not.

55 Wash. Co. Rep. at 9, 67 Pa. D. & C.2d at 237 (quoting Salvador v. Atlantic Steel Boiler Co., 457 Pa. 24, 32, 319 A.2d 903, 907 (1974)). *See also* Sports Management Group v. Allensville Planing Mill, Inc., 16 Pa. D. & C.3d 760 (C.P. Mifflin Co. 1980) (allowing the suit of a subsequent purchaser under the implied warranty theory).

tions that have eliminated the privity requirement.[155]

The abrogation of the privity requirement could have a great effect on the radon situation. A builder-vendor may not only be liable to the first buyer of a home, but liability could also attach when a subsequent buyer undertakes remedial action or suffers a radon injury. The only factor that would appear to eventually eliminate the liability of the builder-vendor would be notice of the defect to the subsequent purchaser[156] or the running of the statute of limitations. While the buyer of a used home could not sue the seller of the home,[157] he would still have the option to sue the builder-vendor if the radon defect was present when he sold the home.

Pennsylvania has, however, stubbornly refused to expand liability under implied warranty to parties other than the builder-vendor. One buying a radon contaminated used home from the owners would not have a cause of action against them; he could sue only the original builder-vendor — assuming the statute of limitations has not run.

Pennsylvania decisions have clearly delineated those parties that could possibly be sued for radon contamination under the implied warranty theory. Courts have held that private vendors of used homes are not amenable to suit under implied warranty.[158] Therefore, these vendors could not be held liable even when excess radon levels are caused by structural defects, or only natural conditions, unless they somehow misrepresent the condition of the home. Further, third parties in the real estate transaction cannot be held liable unless they expressly warranted the quality of the home. Real estate

155. *See* Blagg v. Fred Hunt Co., 272 Ark. 185, 612 S.W.2d 321 (1981); Hermes v. Staino, 181 N.J. Super. 424, 437 A.2d 925 (N.J. Super. Ct. Law. Div. 1981); Moxley v. Laramie Builders, Inc., 600 P.2d 733 (Wyo. 1979); Barnes v. MacBrown, 264 Ind. 227, 342 N.E.2d 619 (1976). *But see* Insurance Co. of No. America v. Bonnie Built Homes, 64 Ohio St.2d 269, 416 N.E.2d 623 (1980).

156. Notice to the purchaser would destroy the latency requirement of the implied warranty.

157. *See infra* notes 160-162.

158. *See* Boozell v. Bollinger, 20 Mer. Co. L.J. 229, 30 Pa. D. & C.3d 247 (1983) (implied warranty not extended to sales by owner); Firsh v. Fernwood Terrace, Inc., 16 Pa. D. & C.3d 311 (C.P. Lehigh Co. 1980) (no liability when buyer purchased lot and subsequently freely contracted with seller to build a home); Ebersole v. Hess, 67 Lanc. L. Rev. 101, 13 Pa. D. & C.3d 675 (1980) (party who is vendor alone does not impliedly warrant the home); Estill v. Vandernat, 90 York 133 (1976) (implied warranty not extended to private buyer and seller); Kline v. Johnson, 47 Northumb. L.J. 135, 70 D. & C.2d 387 (1975) (implied warranty is not found in the sale of a used home by a non-builder); Henry v. Babecki, 65 Pa. D. & C.2d 4 (C.P. Phila. Co. 1974) (implied warranty is not found in the private buyer-seller relationship); Irwin v. Dorman, 87 York 134, 63 Pa. D. & C.2d 118 (1973) (non-builder of used home does not impliedly warranty habitability). *But see* Philadelphia v. Page, 363 F. Supp. 148 (E.D. Pa. 1973) (implied warranty may apply to a reconditioner vendor as well as a builder-vendor).

brokers,[159] home financers,[160] and relocation services[161] are not liable for defects in a home under an implied warranty theory. The modern trend of extending the implied warranty to the sale of commercial dwellings appears to be the only expansion of the doctrine.[162]

D. Leased Premises

The implied warranty of habitability theory is also available to persons leasing premises that are found to be contaminated by radon gas. While radon gas could conceivably collect in apartments, it is not presently a serious problem in Pennsylvania.[163] Because most apartments are not in direct contact with the ground,[164] and because air flow between lower level apartments and higher level apartments is restricted, apartments are relatively free of radon gas due to natural factors. The possibility still exists, however, that individuals renting housing or duplex homes, which are in contact with the ground, may bring suit for rescission of their lease, rent reduction, or damages for their radon exposure.[165]

Pennsylvania has established an implied warranty of habitability in residential leases which is similar to the warranty put forth in

159. *Cf.* Rattigan v. Cooke, 21 Ches. Co. Rep. 224 (1973) (agent is not liable on contract of a disclosed principle unless agent personally assumed obligations).

160. *See* 1000 Grandview Ass'n, Inc. v. Mount Washington Assocs., 290 Pa. Super. 365, 434 A.2d 796 (1981) (lender of construction money for condominium could not be sued on implied warranty). *See also* Scott v. First Investment Corp., 556 F. Supp. 782 (W.D. Pa. 1983) (investment corporation cannot be sued for breach of implied warranty in the sale of a home).

161. *See* Best v. Hammill Quinlan Realty Co., Inc., 61 Wash. Co. Rep. 126, 18 Pa. D. & C.3d 31 (1981).

162. *See* Sports Management Group, Inc. v. Allensville Planing Mill, Inc., 16 Pa. D. & C.3d 760 (C.P. Mifflin Co. 1980) (implied warranty extended to gymnasium). *See also* Pittsburgh Nat'l Bank v. Welton Beckett Assoc., 601 F. Supp. 887 (W.D. Pa. 1985) (implied warranty extended to bank).

163. Gerusky Interview, *supra* note 16.

164. *The Indoor Radon Story*, *supra* note 2, at 36.

165. While no Pennsylvania implied warranty cases have dealt with personal injury damages, courts have held that where a tort cause of action can be found in the relationship between the parties, the tenant is free to pursue damages under those theories. *See* Fair v. Negley, 257 Pa. Super. 50, 390 A.2d 240 (1978) (recovery may lie for intentional infliction of emotional distress if the requisite intent can be shown). *See also* Beasley v. Freedman, 256 Pa. Super. 208, 389 A.2d 1087 (1978). Other jurisdictions have held that if an injury is caused by a defect in the premises, damages for that injury may be recovered. *See* Mansur v. Eubanks, 701 So.2d 328 (Fla. 1981); Cruz v. Drezek, 175 Conn. 230, 397 A.2d 1335 (1978). *See also* Annotation, *Modern Status of Landlord's Tort Liability for Injury or Death of Tenant or Third Person Caused by Dangerous Condition of Premises*, 64 A.L.R.3d 339 (1975). Recovery for radon injury under an implied warranty in a lease would seem doubtful when the circumstances are considered. Since notice of the defect is required, if the tenant was the first to know of the condition, the landlord would not have been in breach prior to the discovery. Damages after discovery would be attributable to the tenant because he stayed in the home. If the landlord knew of the defect and rented the premises anyway, tort theories such as battery would probably be more effective than the implied warranty.

Elderkin. In *Pugh v. Holmes*,[166] the Pennsylvania Supreme Court, citing cases from other jurisdictions, emphasized that all residential[167] leases contain an implied warranty that the premises are reasonably suited for human inhabitance.[168] In *Pugh*, the Pennsylvania Supreme Court held that the doctrine of caveat emptor in our society has "outlived its usefulness and must be abolished."[169] Caveat emptor was well suited for an agrarian society where the land was the major item of any lease, but today the focal point of a lease is the shelter that it provides.[170] The inferior bargaining position of the tenant presently makes it necessary for the law to step in and apply an implied warranty that the premises are fit to be occupied.[171]

It is important to note that before the tenant can claim a breach of the implied warranty under *Pugh*, the tenant must give notice to the landlord of a defect "of a kind and nature that will prevent the use of the dwelling for its intended purpose."[172] Additionally, the landlord must be given an opportunity to correct the defect.[173] Therefore, a tenant of a leased home claiming a breach of implied warranty because of radon contamination would bear the burden of testing for radon. If the test levels proved unsafe, the tenant would be forced to give the landlord reasonable time to take remedial measures before the breach could be claimed.

It seems clear that high radon levels would be a defect that would make a rented home uninhabitable. The court in *Pugh* stated that "at a minimum, this means the [leased] premises must be safe

166. 486 Pa. 272, 405 A.2d 897 (1979). In *Pugh*, a tenant who was sued for back rent set up the implied warranty theory as a defense.

167. The implied warranty has also been applied to leased vacation homes, Beausang v. Bernotos, 296 Pa. Super. 335, 442 A.2d 797 (1982), and commercial premises, C and B Enters. v. Intercarbon Coal Co., 42 Som. L.J. 288, 28 Pa. D. & C.3d 285 (1985).

168. *Pugh*, 486 Pa. at 281, 405 A.2d at 900. More than forty states and the District of Columbia have adopted some form of the implied warranty of habitability in leased premises. *Id.* at 281, 405 A.2d at 901. The seminal case on this issue is Javins v. First National Realty Co., 428 F.2d 1071, *cert. denied*, 400 U.S. 925 (1970) (defense of implied warranty of habitability allowed in rent collection action in the District of Columbia). *See generally*, Annotation, *Modern Status of Rules as to Existence of Implied Warranty of Habitability or Fitness for Use of Leased Premises*, 40 A.L.R.3d 646 (1971).

169. *Pugh*, 486 Pa. at 279, 405 A.2d at 900.

170. *Id.* at 280, 405 A.2d at 901.

171. *Id.* at 282-83, 405 A.2d at 902. With todays large cities and housing shortages, the tenant is often forced to accept premises which are vastly substandard. *Id.* (citing Reitmeyer v. Sprecker, 431 Pa. 284, 289-90, 243 A.2d 395, 398 (1985).

172. *Id.* at 289-90, 405 A.2d at 906. *Accord* Beasley v. Freedman, 256 Pa. Super. 208, 389 A.2d 1087 (1978). "[I]n order to succeed on their complaint [in implied warranty, the tenants] must prove that they gave notice of the defective conditions, that [the landlord] had a reasonable opportunity to correct defects, and that he failed to do so." *Id.* at 211, 389 A.2d at 1088.

173. *See id.*

. . . ."[174] By showing that radon levels are above the Environmental Protection Agency and Department of Environmental Resources recommended guideline levels,[175] it could be shown that the premises are not safe, and thus uninhabitable.

Once the tenant shows that radon levels are unsafe, and that notice and an opportunity to correct has been given to the landlord, various remedies are available to the tenant. The tenant may withhold rent.[176] Decisions prior to *Pugh* held that the covenant to pay rent is dependent upon the landlord's covenant to repair the premises.[177] Consequently, the court in *Pugh* held that if the implied warranty of habitability is breached, the tenant may withhold rent payments until the premises are repaired.[178] If rent was paid, the tenant is entitled to the return of the difference between the rent paid and the fair rental value of the premises for the period that the defect made the premises uninhabitable.[179] In the case of radon, the tenant would probably be freed from paying any rent because the entire premises would be uninhabitable.[180] If the rent was paid unwittingly after notice to the landlord, the tenant could recover this rent.

The repair and deduct alternative[181] would probably be inapplicable to many radon cases. The cost of repairing and deducting may be greater than the total rent due for the term of the lease. With the high costs of many radon remedial measures,[182] this alternative would often be precluded. The more logical option would be to vacate the premises and terminate the lease.

Application of the implied warranty to radon contaminated

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174. *Pugh*, 486 Pa. at 289, 405 A.2d at 905.

175. *See supra* notes 138-142 and accompanying text.

176. *Pugh*, at 292, 405 A.2d at 907. The court refused to adopt a mandatory requirement that the tenant escrow the rent pending disposition of the case. *Id.*

177. *See* McDanel v. Mack Realty Co., 315 Pa. 174, 172 A. 97 (1934). A "dependent covenant" is defined as a covenant that "depends on the prior performance of some act or condition, and, until the condition is performed, the other party is not liable to an action on his covenant." BLACK'S LAW DICTIONARY 327 (5th ed. 1979).

178. *Pugh*, 486 Pa. at 292, 405 A.2d at 907.

179. *Id.*; *see also* Fair v. Negley, 257 Pa. Super. 50, 54, 390 A.2d 240, 242 (1978). *Accord* Beasley v. Freedman, 256 Pa. Super. 208, 389 A.2d 1087 (1978).

180. In most circumstances it could be argued that a home with unsafe radon levels would have a fair market value of zero. Certain areas of the home which are located farther away from the ground, however, may have safe radon levels. It is therefore possible that some parts of the home could be occupied and a percentage reduction in rent formula could be used. Further, mitigation techniques, such as increased ventilation through open windows, may allow some areas of the home to be used. Some portions of the home could be habitable. A cause of action would still exist, however, because the value of the premises is less than that bargained for in the lease.

181. *Pugh*, 486 Pa. at 293, 405 A.2d at 907.

182. The cost to "radon proof" a home averages between $1,000 and $5,000. Murphy, *supra* note 25.

leased premises would be equitable.[183] Pennsylvania has determined that the landlord should bear the burden of making premises habitable. Because notice of the defect must be given to the landlord, the fact that radon is a newly discovered and naturally occurring problem would be of little consequence. The landlord would have to be informed of the problem and given an opportunity to correct the situation through remedial measures. Therefore, under the circumstances, radon contamination would be indistinguishable from other defects.

III. Fraud and the Duty to Disclose

Buyers of radon contaminated homes may also resort to fraud theories of recovery when the seller either knew of a radon problem or represented that there was no radon problem. The situation may be broken down into three basic categories: 1) where the seller knew of the radon problem and represented that it did not exist; 2) where the seller represented that there was no radon problem but failed to actually test the home to determine the truth of his statement; or 3) where the seller knew of the radon problem but failed to disclose this condition to the buyer.

A. Misrepresentation of a Known Radon Condition

Pennsylvania, like other jurisdictions,[184] holds that an action for fraud[185] or deceit will lie when, in a business transaction, the seller knowingly misrepresents the quality of the merchandise that he is selling. To find actionable fraud in a transaction, the plaintiff must establish that there was 1) a misrepresentation, 2) a fraudulent utterance of that misrepresentation, 3) an intention to induce reliance, 4) justifiable reliance on the part of the buyer, and 5) damage as a

183. Pennsylvania has shown some sympathy, however, in not holding the landlord liable for incidents over which he has little control. In Feld v. Merriam, 506 Pa. 383, 485 A.2d 742 (1984), the Pennsylvania Supreme Court refused to hold the landlord liable for the negligent failure to prevent criminal acts. This holding is contrary to the modern trend. *See* Trentacost v. Brussel, 82 N.J. 214, 412 A.2d 436 (1980); Kline v. 1500 Massachusetts Ave. Apt. Co., 439 F.2d 477 (D.C. Cir. 1970). The *Feld* decision indicates some willingness of Pennsylvania courts not to place undue burdens upon the landlord.

184. All jurisdictions hold that the misrepresentation of matters material to a transaction will result in liability on the part of the seller. Bixby, *Let the Seller Beware: Remedies for the Purchase of a Defective Home*, 49 J. URB. L. 533, 534 (1972).

185. Fraud is defined as "[a]n intentional perversion of truth for the purpose of inducing another in reliance upon it to part with some valuable thing belonging to him or to surrender a legal right." BLACK'S LAW DICTIONARY 594 (5th ed. 1979). Fraud is a separate concept from warranty and should not be confused with it as a basis for recovery. 16 PENNSYLVANIA LAW ENCYCLOPEDIA *Fraud* § 1 (1959).

proximate result.[186] A misrepresentation in a business matter is "fraudulent" when the maker knows or has reason to know that the condition of the item being sold is different from that being represented.[187] The fraud need not be expressed in words. Any act that is calculated to deceive, no matter what the form, can constitute a fraud if it has the effect of making the buyer believe that the condition is other than as it really exists.[188] Therefore, a generalized statement of the condition of a home being sold may amount to a fraudulent misrepresentation when there is a latent condition that may make the statement false. Statements that the home is in "A-1 condition,"[189] that the basement joists are "as good as new,"[190] and that the floors are in good condition[191] have all been held to be fraudulent misrepresentations.

The sale of a home contaminated with radon, coupled with knowledge on the part of the seller that the condition exists, would be fraudulent if the seller in any way represented the building as a safe dwelling. A statement that the home would be suitable for occupation or that the home contains no latent or hazardous conditions would be the utterance of a known falsity and would, thus, be actionable fraud or deceit.

A representation on the part of the seller that the home does not have a radon problem would indicate a higher degree of culpability. Many banks and real estate brokers now require radon disclosure forms.[192] A misrepresentation on these forms would be clear fraud actionable by the buyer.[193] Additionally, improper measurement and reporting of a radon test, that is "calculated to deceive," would be actionable. Radon levels vary in different areas of the home.[194] Taking radon measurements from one area of the home that is known to

186. Neuman v. Corn Exchange Nat'l Bank and Trust Co., 356 Pa. 442, 450, 51 A.2d 759, 763 (1947). *See also* 16 PENNSYLVANIA LAW ENCYCLOPEDIA *Fraud* § 2 (1959).

187. *Neuman*, 356 Pa. at 451, 51 A.2d at 764.

188. Frowen v. Blank, 493 Pa. 137, 425 A.2d 412 (1981). *See* PROSSER & KEETON ON TORTS, *supra* note 60, § 106 at 736.

189. Borelli v. Barthel, 205 Pa. Super. 442, 211 A.2d 11 (1965).

190. DeJoseph v. Zambelli, 329 Pa. 24, 139 A.2d 644 (1958).

191. Highmont Music Corp. v. J.M. Hoffman, 397 Pa. 345, 155 A.2d 363 (1959).

192. The Evening News, Harrisburg, Pa., Sept. 26, 1986 at C1, col. 6; Galen, *supra* note 4, at 10; Taylor, *supra* note 10.

193. A writing can be a fraudulent misrepresentation. *See* PROSSER & KEETON ON TORTS, *supra* note 60, § 106 at 736.

194. Houses characteristically show variations in radon levels with the basement having the highest radon levels. The radon levels decrease at higher stories. Gesell, *Background Atmospheric Radon-222 Concentrations Outdoors and Indoors: A Review*, 46 HEALTH PHYS. 289, 296 (1983). For example, the Watras home (*see supra* note 6 and accompanying text) had levels of radon at 1,600 pCi/l in the bedrooms, 2,400 pCi/l in the living room and 4,400 pCi/l in the basement. Smay, *supra* note 3, at 77.

have lower radon levels and reporting these measurements as representative of the entire home would be fraudulent.[195]

Various remedies would be available if the purchase of the home was the result of actionable fraud. Home buyers could rescind the contract,[196] recover damages, or possibly sue for their increased risk of cancer due to the radon exposure.[197]

B. Representation, Without Knowledge, that a Radon Condition Does Not Exist

Pennsylvania courts have also held that actionable fraud can be found where the seller makes a material representation of fact without knowledge as to the truth or falsity of the representation.[198] An uninformed assertion that a house does not have a radon problem, when in fact such a condition exists, may leave the buyer with an action against the individual making the statement.

In *Highmont Music Corp. v. J.M. Hoffman Co.*, the lessor of a store made the statement that the floors were "very, very strong."[199] In actuality, the floors were not capable of supporting any type of business.[200] In addressing the issue of whether knowledge of the falsity of the condition need be shown prior to recovery, the Pennsylvania Supreme Court stated: "[a]bsolute knowledge of the defect need not be shown, for if the defendant had no knowledge of the defective condition of the floors, he should not have made the statement that the floors were 'very, very strong'."[201]

In another case, *Kelly v. Harrington*, the Pennsylvania Superior Court held that an action for fraud could be found when a business arrangement was put forth as being sound, but was ultimately found to be illegal.[202] Although the defendant did not have knowledge of the illegality, the court held "[a]s a general rule, if a person takes upon himself to state as true that of which he is wholly ignorant, he will, if it be false, incur the same legal responsibility as if he had

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195. Galen, *supra* note 4, at 10.

196. *See* DeJoseph v. Zambelli, 392 Pa. 24, 139 A.2d 644 (1958) (in the case of fraud with known falsity, a transaction is voidable even when the misrepresentation is not material).

197. *See* Delahanty v. First Pennsylvania Bank, 318 Pa. Super. 90, 464 A.2d 1243 (1983); *see also* 16 PENNSYLVANIA LAW ENCYCLOPEDIA, *Fraud* § 33 (1959).

198. The state of mind with which liability can attach without knowledge is a reckless disregard as to the truth or falsity, and is known as scienter. *See* PROSSER & KEETON ON TORTS, *supra* note 60, § 107 at 41-45; *see also* 16 PENNSYLVANIA LAW ENCYCLOPEDIA, *Fraud* § 7 (1959).

199. 397 Pa. 345, 350, 155 A.2d 363, 366 (1959).

200. *Id.* at 348, 155 A.2d at 365.

201. *Id.* at 350, 155 A.2d at 366.

202. 191 Pa. Super. 361, 156 A.2d 601 (1959).

made the statement with knowledge of its falsity."[203]

In the radon situation, the buyer of a home would have an action for fraud if the seller states that the home is "radon safe" when, in actuality, that seller had no knowledge of its radon condition. Arguably, such a holding would only be logical. If the seller chooses to represent his property as having certain characteristics, when, in fact, it is unknown if those characteristics exist, that seller should bear the risk of any subsequently discovered defects.

Even an innocent misrepresentation, made on an honest and reasonable belief that those conditions actually exist, may afford the buyer some relief. In the case of an entirely innocent misrepresentation, over an item material to the transaction,[204] the sale is voidable at the buyer's option.[205] If a home is represented as radon free on the basis of past and/or mistaken data, and it is subsequently discovered that the home has a radon problem, the contract can be rescinded.

C. The Duty to Disclose

In Pennsylvania, the seller of a radon contaminated home would have a duty to disclose this contamination to an unwitting buyer. Pennsylvania courts have held that when a seller of a home knows of a dangerous latent condition, the seller must disclose this condition.

Under ordinary circumstances, the seller of goods is under no duty to disclose to the buyer information material to the purchase of goods.[206] At common law, a duty to disclose was imposed only in the

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203. *Id.* at 365, 156 A.2d at 603 (citing Hexter v. Bast, 125 Pa. 52, 17 A. 252 (1889)). *See also* Adams v. Euliano, 299 Pa. Super. 348, 445 A.2d 788 (1982) (seller can be liable for an innocent misrepresentation in a home sale when the seller is under a duty to know the condition of the home); Glanski v. Ervine, 269 Pa. Super. 182, 409 A.2d 425 (1979) (material misrepresentation could be found even where agent was unaware of termite problem in a home). *Cf.* English v. Lehigh County Auth., 286 Pa. Super. 312, 428 A.2d 1343 (1981) (seller can be liable for physical harm caused by negligent transmission of information when there was no duty to speak).

204. A misrepresentation is material to the transaction if, but for the misrepresentation, the transaction would not have been entered into. DeJoseph v. Zambelli, 329 Pa. 24, 139 A.2d 644 (1958). *See also* PROSSER & KEETON ON TORTS, *supra* note 60, § 108 at 53-54. To be material to the transaction, the factor need not be the sole inducement, only an important or a significant factor in the transaction. Neuman v. Corn Exchange Nat'l Bank, 356 Pa. 442, 454, 51 A.2d 759, 765 (1947).

205. If the fraud was knowing, the transaction is voidable by the buyer even in the absence of materiality. If the misrepresentation was innocent, however, only a factor which is material and basic to the bargain can result in the transaction being voidable. *See* Delahanty v. First Pennsylvania Bank, 318 Pa. Super. 90, 464 A.2d 1243 (1983).

206. *See* PROSSER & KEETON ON TORTS, *supra* note 60, § 106 at 737; Note, *Reed v. King: Fraudulent Non-Disclosure of a Multiple Murder in a Real Estate Transaction*, 45 U. PITT L. REV. 877, 878 (1984); 16 PENNSYLVANIA LAW ENCYCLOPEDIA, *Fraud* § 5 (1959). *See generally* Keeton, *Fraud — Concealment and Non-disclosure*, 15 TEX. L. REV. 1 (1936) [hereinafter Keeton, *Fraud*].

scope of a confidential relationship between the parties.[207] In the case of business transactions, confidential relationships did not exist because the transactions were seen as being carried on at an arms length.[208]

The rule of non-disclosure has been described as "unappetizing."[209] As a result, the rule, like caveat emptor, has been eroded.[210] In Pennsylvania, an exception has been found that the seller of a home must disclose the existence of a latent dangerous condition or be liable for that condition's consequences.[211]

In *Shane v. Hoffman*,[212] the Pennsylvania Supreme Court adopted Restatement (Second) of Torts § 353.[213] *Shane* involved a

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207. 16 PENNSYLVANIA LAW ENCYCLOPEDIA, *Fraud* § 5 (1959). Keeton summarily stated the rule:

> It is frequently stated in the decisions that the law imposes no duty on the party to a transaction to disclose information in the absence of a confidential or fiduciary relationship: such as, principal and agent, trustee and cestui, parent and child, guardian and ward, and attorney and client. These confidential or fiduciary relationships have been confined within narrow limits; as evidence of this, it has been held that the relationship of tenants-in-common was not one which carried with it this duty to speak; . . . . Certainly, it must be admitted that these cases have been treated as exceptions to the rule that fraud requires a misrepresentation, the argument being made that fraud requires a misrepresentation only so long as no duty to speak has been imposed by law.

Keeton, *Fraud, supra* note 206, at 11-12. *See also, e.g.*, Frowen v. Blank, 493 Pa. 137, 425 A.2d 412 (1981) (finding that a confidential relationship existed between an eighty-six year old woman and a friend who purchased her land).

208. *See supra* note 207.

209. PROSSER & KEETON ON TORTS, *supra* note 60, § 106 at 738.

210. *Id.*

211. The general exception in Pennsylvania law is described in 16 PENNSYLVANIA LAW ENCYCLOPEDIA *Fraud* § 5 (1959):

> An exception to the rule . . . [is when there is a] duty to speak . . . it has been held that suppression of the truth amounts to a fraudulent representation when a person knows that one is about to enter into a contract but fails to disclose a *material fact* unknown to the party . . . [who] . . . *is without means of that* knowledge.

Id. (emphasis added). *See also* PROSSER & KEETON ON TORTS, *supra* note 60, § 106 at 739 (there has been a tendency to find liability when the plaintiff has no access to the truth).

212. 227 Pa. Super. 176, 324 A.2d 532 (1974).

213. RESTATEMENT (SECOND) OF TORTS § 353 (1965) states:

> § 353. Undisclosed Dangerous Conditions Known to Vendor
>
> (1) A vendor of land who conceals or *fails to disclose* to his vendee any condition, whether natural or artificial, which involves unreasonable risk to persons on the land, is subject to liability to the vendee and others upon the land with the consent of the vendee or his subvendee for physical harm caused by the condition after the vendee has taken possession if
>
> (a) the vendee does not know or have reason to know of the condition or the risk involved, and
>
> (b) the vendor knows or has reason to know of the condition, and realizes or should realize the risk involved, and has reason to believe that the vendee will not discover the condition or realize the risk.
>
> (2) If the vendor actively conceals the condition, the liability stated in Subsection (1) continues until the vendee discovers it and has reasonable opportunity

home seller's failure to disclose the fact that the basement of the home was defective and had previously become flooded with sewage.[214] The court recognized that while "silence is not usually actionable," a duty to speak may exist in certain circumstances.[215] With the adoption of § 353, the vendor of the home had a duty to disclose anything known to him that would put the purchaser and his family in danger of life and limb.[216]

This holding was reiterated by the Pennsylvania Superior Court in *Quashnock v. Frost*.[217] In *Quashnock*, the vendor of a home and the broker failed to disclose the fact that the home was infested with termites.[218] While the Pennsylvania Superior Court continued to recognize that the vendor need not disclose every minor point to the sale, § 353 and the *Shane* holding were again given credence.[219] In holding that a vendor must disclose termite infestation, the court ruled that if the trial court determined that a condition was dangerous to others, that condition must be disclosed.[220]

Applied to the radon situation, these rulings clearly point to the proposition that known radon contamination must be disclosed. The trial court determines whether or not known radon levels constitute a dangerous condition. Again, as with other determinations of defect, the 4 pCi/l standard can be used as a baseline.[221] Liability for failure to disclose a known condition would be equitable and lead to more informed choices by buyers and less overall radon exposure.

This rationale has been applied in another jurisdiction in one of the few cases dealing with radon. In *Schnell v. Gustafson*,[222] the purchasers of a home sued the home vendor for failing to disclose that their home was built on uranium mill tailings. The Colorado

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to take effective precautions against it. Otherwise the liability continues only until the vendee has had reasonable opportunity to discover the condition and to take such precautions.

Id. (emphasis added). Note that while this section applied to physical harm, the court in *Shane* applied the section to find liability for economic loss to the premises.

214. *Shane*, 227 Pa. Super. at 180, 324 A.2d at 535.

215. *Id.* at 184-86, 324 A.2d 537-38.

216. *Id.*

217. 299 Pa. Super. 9, 445 A.2d 121 (1982).

218. *Id.* at 11-13, 445 A.2d at 121-22.

219. *Id.* at 19, 445 A.2d at 126 (quoting Annotation, *Duty of Vendor of Real Estate to Give Purchaser Information as to Termite Infestation*, 22 A.L.R.3d 972, 975 (1969).

220. *Quashnock*, 299 Pa. Super. at 22, 445 A.2d at 127-28. Although the dissent in *Quashnock* argued that there should be no liability because the situation was not latent, this would not be a problem in a radon scenario. Because radon cannot be detected without special devices, and because the tests take time to perform, reliance on non-disclosures would be justified because of the defect's latency.

221. *See supra* notes 138-142 and accompanying text.

222. 638 P.2d 850 (Colo. Ct. App. 1981).

Court of Appeals held that an action of fraud and deceit was properly founded.[223] Although much of the court's holding deals with lack of privity,[224] the language also clearly points to a duty to disclose the presence of radon gas in the sale of a home. Because the condition was a known latent defect,[225] it was one that in equity and all good conscience should have been disclosed.[226]

D. Liability of the Broker

The real estate broker may also be held liable for the sale of a home with a known radon condition and for the representation that a home does not have a radon problem.[227] A real estate broker is a well informed intermediary party and should therefore be under a duty to disclose conditions that he knows of concerning the suitability of the home.[228] While most courts have focused on the knowledge of the broker in determining liability,[229] there is support for two opposing propositions. First, a broker has a duty only to respond and inspect in answer to a direct concern expressed by the buyer.[230] Alternatively, the broker has a duty to inspect and reveal all physical defects in the property.[231]

Pennsylvania treats broker liability similarly to vendor liability. If the broker knows of latent material defects, he must disclose these defects.[232] Similarly, if the broker makes a representation as to the condition of the home, the broker can be held liable if the statement

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223. *Id.*

224. The court noted that privity was not a problem. "This doctrine of contract law, privity of contract, may not be used as a shield, in this tort action." *Id.* (citations omitted).

225. *Id.* The court also found justifiable reliance because the parties were in the market for a home and had previously met. *Id.*

226. The fact that *Gustafson* involved mill tailings, a man-made latent defect, as opposed to a natural situation should be of little consequence. Courts have held a duty to disclose defects even when the defect requiring disclosure was a condition or characteristic of the home rather than a structural defect. *See, e.g.*, Reed v. King, 145 Cal. App.3d 261, 193 Cal. Rptr. 130 (1983) (vendor has a duty to disclose the fact that a multiple murder took place on the property).

227. "Buyers are beginning to sue . . . real estate agents for non-disclosure . . ." Galen, *supra* note 4, at 1.

228. *See generally* Note, *Imposing Tort Liability on Real Estate Brokers Selling Defective Housing*, 99 HARV. L. REV. 1861 (1986) [hereinafter *Broker Tort Liability*]; Annotation, *Real-Estate Broker's Liability to Purchaser for Misrepresentation or Nondisclosure of Physical Defects in Property Sold*, 46 A.L.R. 4th 546 (1986).

229. Annot., *supra* note 228, § 2a at 552.

230. *Id.* § 4 at 558.

231. *Id.* § 3 at 555.

232. *See* Long v. Brownstone Real Estate Co., 335 Pa. Super. 268, 484 A.2d 126 (1984); Quashnock v. Frost, 299 Pa. Super. 9, 445 A.2d 121 (1982); Glanski v. Ervine, 269 Pa. Super. 182, 409 A.2d 425 (1979). *See also* Shane v. Hoffman, 227 Pa. Super. 176, 324 A.2d 532 (1974).

is made with reckless disregard as to the statement's truth or falsity.[233]

Courts in Pennsylvania have found liability on the part of a broker when the broker does not disclose a dangerous latent defect. In *Long v. Brownstone Real Estate*, the Pennsylvania Superior Court held that a real estate broker could be amenable to suit for failure to disclose that the basement of a building was subject to frequent flooding.[234] The broker knew of the previous floodings but only told the buyers that the home had a "water problem."[235] Because the buyers were misled as to the extent of the water problem, they had a cause of action for misrepresentation based on the broker's affirmative representations and the broker's failure to disclose latent defects.[236] Both the broker and the real estate company that the broker represented were parties to the suit.[237]

In the case of a home contaminated with radon, the broker again faces possible liability if he misrepresents or fails to disclose. If the home is known to be radon contaminated, the broker would have a duty to disclose the condition. Additionally, the broker would have the duty to make truthful representations as to radon levels of a home under traditional fraud principles.

Such liability would be reasonable under the circumstances. A broker is the supplier of information of conditions relating to the sale, and economically, the broker is the most efficient information provider.[238] He, like the owner of the house, possesses access to information regarding the characteristics of the home. The broker is in the bargaining position to request radon disclosure from the seller of a home, and also possesses the time and resources to make a reasonable test of the home.[239]

These factors become even more important when dealing with a latent, dangerous condition such as radon. Requiring the broker to be a broker of radon information would lead to lower exposure rates

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233. *See* Slaybaugh v. Newman, 330 Pa. Super. 216, 479 A.2d 517 (1984); Shane v. Hoffman, 227 Pa. Super. 176, 324 A.2d 532 (1974); Sprague v. Eastwood Realty Co., 119 P.L.J. 392, 53 Pa. D. & C.2d 440 (1971); Igoe v. Yori, 32 Leh. L.J. 528 (C.P. Lehigh Co. 1968).

234. 335 Pa. Super. 268, 484 A.2d 126 (1984).

235. *Id.* at 271, 484 A.2d at 128.

236. *Id.* at 271-72, 484 A.2d at 128-29.

237. In *Long*, the individual brokers who made the representation were named defendants, individually and as representing the realtor. In addition, the real estate agency and its owners were also named as defendants. *Id.* at 268, 484 A.2d at 126.

238. *Broker Tort Liability, supra* note 228, at 1867.

239. *Id.*; "[T]he broker usually is better able than the buyer to identify and obtain important information from the owner." *Id.* at 1868.

on the part of home purchasers. Informed of radon contamination at the outset, the purchaser of a home could take immediate remedial steps. If uninformed, the buyer could face many years of harmful radon exposure.

If the broker discloses a radon condition, subsequent liability will not attach if the condition or remedial measures are more expensive than were reasonably contemplated. In *Gozon v. Henderson-Dewey Assoc.*, the Pennsylvania Superior Court held that once a broker discloses the information known to him, he cannot be liable merely because his statement of opinion as to the cost of repair proves to be inaccurate.[240]

IV. Disclaimers

The potential for radon liability, under either breach of warranty or misrepresentation theories, is likely to be high. With the number of Pennsylvania homes expected to be affected by the problem,[241] and the high cost of remedial measures in certain circumstances,[242] builders and vendors of homes can be expected to search for means to transfer the risk of radon contamination to the buyer of the home. The first line of defense in this regard will be disclaimers of liability and inspection clauses.[243] To establish such defenses, the builder would recite in the deed or contract of sale either that the buyer takes the home "as is" or that the seller affirmatively disclaims any liability for the presence of unsafe levels of radon gas.

In real property transactions, such provisions have met with mixed results.[244] Precedents in Pennsylvania law, however, clarify that the mere recitation of an "as is" inspection clause in the deed will not be considered a valid defense for liability of the builder-vendor founded in the implied warranty theory. The major Pennsylvania case in this area is *Tyus v. Resta.*[245] In *Tyus*, the buyer of a

240. 312 Pa. Super. 242, 458 A.2d 605 (1983) (broker held not liable for excess cost of repairing defective pool when broker fully disclosed the existence of defective condition).

241. *See supra* notes 6-12 and accompanying text.

242. *See supra* note 182.

243. *See* Galen, *supra* note 4, at 10.

244. "[C]ourts have displayed no favorable attitude towards disclaimers, construing them away, or finding that they are not adequately brought home to the plaintiff." PROSSER & KEETON ON TORTS, *supra* note 60, § 97 at 692. *See generally* Note, *Real Property — Implied Warranty of Fitness and Habitability — Contract Language Stating No Warranties, Express or Implied, is Effective Disclaimer of Implied Warranty of Fitness and Habitability in Sale of New Homes by Builder-Vendor*, 15 ST. MARY'S L.J. 673 (1984) [hereinafter Note, *Real Property — Disclaimer of Warranty*].

245. 328 Pa. Super. 11, 476 A.2d 427 (1984). Pennsylvania previously had held that disclaimers against liability for negligent acts are valid under limited circumstances. In Warren City Lines, Inc. v. United Refining Co., 220 Pa. Super. 308, 287 A.2d 149 (1971) the

home sued on the implied warranty of habitability theory, claiming that the warranty had been breached when the crawl space under the home proved to have inadequate drainage.[246] The contract of sale for the home contained a provision that the home buyer had inspected the home or had "waive[d] the right to do so."[247] The builder-vendor of the home attempted to use this clause as a defense in the action for breach of implied warranty.[248]

The superior court, however, held that the builder-vendor could not validly assert the "as is" inspection clause as a defense on an action for breach of implied warranty concerning a latent defect of the premises.[249] The strong public policy[250] reasons established for adopting the warranty precluded a waiver of that warranty by broad terms such as that recited in the contract of sale. An inspection clause requires only reasonable inspection of the property, and an undiscoverable latent defect falls outside such a clause.[251]

In the radon situation, an inspection clause would have no effects on the buyer's rights. A mere general statement that the buyer "has inspected the property" or takes the property "as is" would not

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superior court held that a disclaimer would be seen as valid when 1) it does not contravene public policy; 2) it relates solely to private affairs; and 3) each party was free to bargain and the contract is not one of adhesion. *Id.* at 311-12, 287 A.2d at 150-51. The court also stated, regarding disclaimers of liability, that a greater tendency exists to void the disclaimer when the party making the transfer is better able to prevent loss than the party receiving the transfer and that party cannot realize the full extent of liability assumed. *Id.* It would seem likely that these factors would also be considered when construing disclaimers of liability under the implied warranty.

246. *Tyus*, 328 Pa. Super. at 16-17, 476 A.2d at 430.

247. The entire inspection clause in *Tyus* stated:

> Buyer has inspected the property or hereby waives the right to do so and he has agreed to purchase it as a result of such inspection and not because of or in reliance upon any representation made by the Seller . . . and that he has agreed to purchase it in its present condition unless otherwise specified herein. It is further understood that this agreement contains the whole agreement between the Seller and the Buyer and there are no other terms, obligations, covenants, representations, statements or conditions, oral or otherwise of any kind whatsoever concerning this sale.

Id. at 21, 476 A.2d at 432.

248. *Id.*

249. *Id.* at 25, 476 A.2d at 440-41.

250. The *Tyus* court echoed the broad public policy reasons of implied warranty established by Elderkin v. Gaster, 447 Pa. 118, 288 A.2d 771 (1972). *See supra* notes 77-85 and accompanying text. "As between the builder-vendor and the vendee, the position of the former dictates that he bear the risk that a home which he built will be functional and habitable . . ." *Tyus*, 328 Pa. Super. at 19, 476 A.2d at 431.

251. *Tyus*, 328 Pa. Super. at 22, 476 A.2d at 433.

> A reasonable pre-purchase inspection requires examination of the premises by the intended purchaser—not by an expert. Defects which would not be apparent to an ordinary purchaser as a result of a reasonable inspection constitute latent defects covered by the implied warranties.

Id.

cover radon because radon is clearly a defect so latent that a reasonable pre-purchase inspection would not uncover unsafe levels of gas.[252] The builder-vendor has an opportunity to run lengthy pre-purchase tests for radon, but the buyer, on a cursory examination, would be forced to accept the property without having the ability to enter into the agreement with full knowledge of the condition of the property. Thus, the mere recitation of a general inspection clause in a lease should not be seen as a wavier of the implied warranties of habitability and workmanship when applied to radon defects.

Commentators on the effect of inspection clauses on implied warranties support this result.[253] When applied to latent defects, the application of an inspection clause would be inequitable. It would be unreasonable to hold, in a non-commercial setting, that a disclaimer such as an inspection clause should apply to a defect which was unknown to the buyer at the time of sale.[254] This is doubly valid when the defect is a condition such as radon. Given the serious health consequences of radon, it is unlikely that a home buyer would actually have accepted the home had he known of the problem and been aware that his waiver encompassed the condition.

Strong public policy reasons exist for not allowing a general inspection clause to bar an action based on implied warranty. The implied warranty was established because the builder-vendor possessed a greater ability to inspect or prevent defects.[255] As has been stated, this public policy rationale applies to a latent health threat such as radon as well as traditional structural defects.[256] It would completely defeat the purpose of the implied warranty, and the public policy behind it, if the builder-vendor was allowed to disclaim any liability for radon contamination merely through the recitation of a generalized inspection clause in the deed.[257]

Builder-vendors of homes, however, would be able to contract away liability for radon contamination if the disclaimer was particular enough to evidence a clear intent of the parties to transfer the

252. An argument may be attempted that corollary to a ruling that a reasonable builder should foresee the presence of radon, a reasonable buyer may also have the duty of conducting a radon test in the course of a reasonable inspection.

253. *See generally* Note, *Real Property — Disclaimers of Warranty*, *supra* note 244; Haskell, *supra* note 134; Note, *Elderkin v. Gaster*, *supra* note 79.

254. PROSSER & KEETON ON TORTS, *supra* note 60, § 97 at 691.

255. *See* Elderkin v. Gaster, 447 Pa. 118, 288 A.2d 771 (1972).

256. *See supra* notes 132-135 and accompanying text.

257. One commentator stated that "[i]t would be a strange system that would allow the buyer rights under the implied warranty of habitability and fitness and declare that his rights can be taken away without his even having been aware of the loss." Note, *Real Property — Disclaimer of Warranties*, *supra* note 244, at 686.

risk for that particular defect. Although the *Tyus* decision held that general inspection clauses were inapplicable to specific defects, the superior court affirmatively stated that if the disclaimer clause was clear and unambiguous as to the areas being disclaimed, then the clause is enforceable.[258] The court stated:

> To create clear and unambiguous language of disclaimer, the parties' contract must contain language which is both understandable and sufficiently particular to provide the new home purchaser adequate notice of the implied warranty protections that he is waiving by signing the contract. To provide proper notice, language of disclaimer must refer to its effect on specifically designated, potential latent defects. Evidence that the purchaser and the builder-vendor actually negotiated the waiver language in the parties' contract will tend to indicate that the purchaser was aware of the contract's wavier language and its import and accordingly, will tend to substantiate a valid waiver.[259]

Therefore, if the disclaimer of liability applies to a particular latent defect, the buyer's cause of action under the implied warranty can be barred. If the builder-vendor of homes wishes to relieve himself from possible liability, he can provide for a clear disclaimer in the contract for sale. A statement in clear print providing that the buyer assumes all responsibility for the particular defect of radon would satisfy the requirements for a valid waiver of the implied warranty.[260]

The contract of sale between the builder-vendor and the buyer would represent the intent of the parties and should be given full faith and credit by the courts. Additionally, the mere presence of the disclaimer of radon liability will put the buyer on notice that the builder is making no representations that the radon in the home is within safe levels. A reasonable buyer would be aware that radon tests should be conducted rather than relying on the builder-vendor's implied or express warranties. The ability to disclaim liability for radon contamination would also alleviate some of the harshness found in viewing radon as encompassed by the implied warranty.

The same radon disclaimer in a lease, even though particular and unambiguous, would not be valid. While the implied warranty in the sale of a home is founded on the builder's superior knowledge,

258. *Tyus*, 328 Pa. Super. at 21, 476 A.2d at 432.

259. *Id.* (citations omitted).

260. A clear statement of disclaimer would meet all of the burdens of waiver of liability previously required by Pennsylvania courts. *See supra* note 245 and accompanying text.

and can thus be freely contracted away, the implied warranty in a lease is based on the superior bargaining position of the lessor. Any attempt to disavow or waive that implied warranty has been seen as an unconscionable contract of adhesion, and, therefore, the disclaiming clause has not been given its full effect.

In *Fair v. Negley*, a tenant sued his landlord for breach of the implied warranty when the home that he rented had a defective water system.[261] The landlord attempted to use a general "as is" clause as a defense to the action.[262] The superior court held that the clause was invalid.[263] The *Pugh* decision established that the implied warranty was necessary because of the inferior bargaining position of tenants seeking suitable living areas.[264] The exculpatory provision of the "as is" clause failed for this same reason. The tenant was unable to bargain for suitable housing. If exculpatory provisions were allowed, tenants would be forced to accept the premises in uninhabitable conditions.[265]

Even when a disclaimer is clear, unambiguous, and particular to the effect that liability for radon contamination is being disclaimed, the clause would still be unenforceable under the *Fair* standard. The freedom of bargaining aspect that makes a valid radon disclaimer possible in the sale of a home is absent in the landlord-tenant context. Thus, it would appear that a disclaimer which is valid in the sale of a home would be ineffective in the rental of that same home.

Radon inspection clauses and disclaimers will also fail to bar suits founded upon the fraud of the seller or lessor of the home. Contract provisions which attempt to preclude an action for fraud have generally proved inadequate.[266] In Pennsylvania, a statement in a lease or contract of sale that the owner of the home will not be held liable for radon contamination will not be enforced when the owner has failed to disclose a known radon condition or has misrepresented the radon status of the home.

In *National Building Leasing v. Byler*, the buyer of a parcel of land filed suit against the seller after discovering that the land had

261. Fair v. Negley, 257 Pa. Super. 50, 390 A.2d 240 (1978).

262. *Id.* at 55, 390 A.2d at 243.

263. *Id.* at 60, 390 A.2d at 245.

264. *See* Pugh v. Holmes, 486 Pa. 272, 405 A.2d 897 (1977).

265. *Fair*, 288 Pa. Super. at 57-58, 390 A.2d at 244-45. *See also* Galligan v. Arovitch, 421 Pa. 301, 219 A.2d 463 (1966) (exculpatory clause in lease does not free landlord from liability for negligence); Care v. Berger, 97 Dauph. Co. 356, 69 Pa. D. & C.2d 434 (1976) (exculpatory clause not allowed in lease).

266. Annotation, *Construction and Effect of Provision in Contract for Sale of Realty by which Purchaser Agrees to Take Property "As Is" or in the Condition in Which It Is*, 97 A.L.R.2d 849, 849 (1964).

been filled with debris from homes which used to be located there.[267] Although the contract of sale contained an inspection clause, the superior court refused to give the clause its full credence.[268] First, the parol evidence rule allowed evidence of the misrepresentation to modify the contract of sale because fraud was involved.[269] Second, because the defect was latent, the inspection clause did not preclude justifiable reliance on the representations of the seller.[270]

Applied to the sale of a radon contaminated home, the recitation of an inspection clause would not preclude an action based on fraud or an action based upon the failure to disclose the latent hazardous condition. As the court held in *National Building*, evidence of fraud would be introduced, and the contract reciting the clause modified. Further, all the traditional elements of the tort of fraud would be present. Justifiable reliance would still be present because radon is a latent condition, undiscoverable upon reasonable inspection. Thus the buyer had a right to rely on the misrepresentations of the seller.

This analysis would not be altered by the fact that the lease may contain a particular radon disclaimer rather than a general inspection clause. Although normally the disclaimer may shift the risk of a radon problem to the buyer, that buyer still has justifiably relied on the seller's representation that the home is "radon-safe."

V. Statutes of Limitation

A second line of defense likely to be used by the sellers of radon contaminated homes against actions founded in breach of implied warranty or fraud will be the statute of limitations.[271] Due to radon's latent characteristics, it could be many years before a home buyer realizes that his home has a problem and commences an action for the cost of remedial measures or possibly for personal injury.[272]

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267. 252 Pa. Super. 370, 381 A.2d 963 (1977).

268. *Id.* at 376, 381 A.2d at 966.

269. *Id.* at 374, 381 A.2d at 965.

270. *Id.* at 375, 381 A.2d at 966. *See also* Nadolny v. Scoratow, 412 Pa. 488, 195 A.2d 87 (1963) (waiver clause in lease is not applicable to an action based on intentional misrepresentation); Highmont Music Corp. v. J.M. Hoffman, 397 Pa. 345, 155 A.2d 363 (1959) (inspection clause in lease does not bar fraud action); Sprague v. Eastwood Realty Co., 119 P.L.J. 392, 53 Pa. D. & C.2d 440 (1971) (exculpatory provisions in agreement do not bar action on the tort of fraud). *Cf.* Abrams v. Crown, 178 Pa. Super. 407, 116 A.2d 331 (1955) (finding a justifiable reliance when misrepresentation caused inducement not to inspect).

271. *See* Sherman, *supra* note 4.

272. The personal injury aspect of the implied warranty of habitability has not yet been addressed by the Pennsylvania appellate courts. Some jurisdictions, however, hold the builder-vendor liable for personal injuries. *See, e.g.*, Schipper v. Levitt & Sons, 44 N.J. 70, 207 A.2d 314 (1965). *See also generally* Note, *Elderkin v. Gaster*, *supra* note 79. Under landlord ten-

Pennsylvania apparently would apply the four year contractual statute of limitations to actions based upon implied warranty in the sale of a home.[273] This statute of limitations, however, will not be strictly applied in an action for damages that were incurred in taking remedial radon measures.

Pennsylvania has held, in cases involving defective construction, that that statute of limitations begins to run when the defect could reasonably be discovered, rather than when the contract is made. In *A.J. Aberman, Inc. v. Funk Building Corp.*, the Pennsylvania Superior Court held that the "discovery rule" is applicable to a defect in the roof of a building.[274] In *Aberman*, the owner of a shopping center brought a suit for damages caused by the defective construction of a roof.[275] The defendant contractor asserted the defense of the six-year contractual statute of limitations.[276] The superior court, however, held that whether the statute of limitations had run was a question for the jury.[277] Borrowing from personal injury precedents, the court reasoned that the statute of limitations could only reasonably begin to run after the owners had discovered the defect.[278] The court stated: "[i]n the case of a latent defect in construction, the statute of limitations will not start to run until the injured party becomes aware, or by reasonable diligence should have been aware of, the defect."[279]

This rationale should be extended to the sale of a radon contaminated home. Strict application of a four year statute of limitations to claims would do injustice to people who have been burdened with a home which is uninhabitable. The statute of limitations would still be applicable, however, when the buyer was on notice of an existing

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ant actions personal injury suits would achieve greater success under a battery action or similar tort theory. *See supra* note 165. For fraudulent misrepresentation or nondisclosure, RESTATEMENT (SECOND) OF TORTS § 353, adopted by Pennsylvania in Shane v. Hoffman, 227 Pa. Super. 126, 324 A.2d 532 (1974), applied specifically to personal injury actions. The question would involve major determinations by the Pennsylvania courts and as such is outside the scope of this Comment although such a test case could conceivably involve radon exposure and injury.

273. The applicable statute of limitations for an action based upon the implied warranty in the sale of a home is an issue in itself and it is outside the scope of this Comment. Most likely the four year limitations period of 42 PA. CONS. STAT. § 5525 (1981) would apply, either as an action based on a contract for the sale of a fixture or a general contract.

274. 278 Pa. Super. 385, 420 A.2d 594 (1980).

275. *Id.* at 388, 420 A.2d at 595-96.

276. *Id.* at 388, 420 A.2d at 596.

277. *Id.* at 393-96, 420 A.2d at 599-600.

278. *Id.*

279. *Id.* at 396, 420 A.2d at 599. *But see* Jones & Laughlin Steel Co. v. Johns-Manville Corp., 626 F.2d 280 (3d Cir. 1980) (applying Illinois law, the statute began running with the performance of the contract).

radon problem. If the home buyer is in a radon prone area and fails to test for radon, the courts could view the buyer's failure to discover the defect as unreasonable. In this case, the statute would begin running at the time the radon test should have been made. Suit on the defect would also be barred if the action is not commenced within four years of the discovery of a known radon problem.

The discovery rule would also apply to suits for personal injury based on radon contamination. In Pennsylvania, actions for personal injury damages must be brought within two years of the time of their discovery.[280] Pennsylvania, however, supports the proposition that in "creeping disease cases,"[281] the statute of limitations begins to run when the party knew of his injury and knew of the cause of injury rather than when the person took his "first breath"[282] of the substance that caused his injury. The first breath rule, which courts previously applied in other jurisdictions, states that the statutory period begins to run when the victim took his first breath of the dangerous item.[283] Pennsylvania, through a long line of asbestos cases, has clearly rejected this rule.[284] These cases hold that with injuries caused by airborne health hazards, the statute of limitations begins to run when the victim 1) had knowledge that he had been injured, 2) had knowledge of the operative cause of that injury, and 3) knew of the relationship between the cause of the injury and some conduct of the defendant.[285] The victim should not wait until he develops a specific disease such as cancer. Rather, the victim must sue for damages as soon as his exposure is discovered.[286]

This principle has generally been applied in other jurisdictions

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280. 42 PA. CONS. STAT. § 5524(2) (1981) states:

> The following actions and proceedings must be commenced within two years: . . .
>
> (2) An action to recover damages for injuries to the person or for the death of an individual caused by the wrongful act or neglect or unlawful violence or negligence of another.

281. "Creeping disease" is a term used in asbestos cases to describe slowly advancing disease conditions that result from the inhalation of hazardous substances. *See* Cathcart v. Keene Indus. Insulation, 324 Pa. Super. 123, 471 A.2d 493 (1984).

282. *See generally* Birnbaum, *"First Breath's" Last Gasp: The Discovery Rule in Product Liability Cases*, 13 FORUM 279 (1977).

283. *Id.* at 281-82.

284. *See* Price v. Johns-Manville Corp., 336 Pa. Super. 133, 485 A.2d 466 (1984); Cathcart v. Keene Indus. Insulation, 324 Pa. Super. 123, 471 A.2d 493 (1984); Staino v. Johns-Manville Corp., 304 Pa. Super. 280, 450 A.2d 681 (1982); Anthony v. Koppers Co., 284 Pa. Super. 81, 425 A.2d 428, *rev'd* 496 Pa. 119, 436 A.2d 181 (1981). *See also* Birnbaum, *Statutes of Limitations in Environmental Suits: The Discovery Rule Approach*, 16 No. 4 TRIAL 38 (1980).

285. Hunsicker v. Conner, 318 Pa. Super. 418, 421, 465 A.2d 24, 26 (1983).

286. *See* Shadle v. Pearce, 287 Pa. Super. 436, 430 A.2d 683 (1981).

to radiation injury cases.[287] Radon induced cancers have a twenty year latency period.[288] The asbestos cases clearly emphasize that the cause of action accrues when a victim realizes he has been exposed to radon, rather than when a lung cancer or a stomach cancer develops. An argument could be made that radon exposure cases are different than asbestos cases because, in the radon situation, it seems that the victim has no present injury. At least one jurisdiction has held, however, that exposure to radon is a "present injury" which gives the victim the right to begin a cause of action upon learning of his exposure. In *Brafford v. Susquehanna Corp.*, homeowners filed suit against the owners of a uranium processing mill.[289] The plaintiffs claimed that the mill had produced "mill tailings" and that these tailings had been placed in the foundation surrounding their home prior to its purchase.[290] As a result, the home had levels of radon gas in excess of government established standards.[291] The defendants moved to dismiss the suit on the ground that the plaintiffs had suffered no "present injury" on which to sue.[292] The district court, however, held that a present injury could be found. The court stated:

> While we all concededly suffer the possibility of chromosome damage as a result of exposure to carcinogens, the damage, and the attendant increased risk, is proportional to the degree of exposure. Here, because of the high levels of radiation to which plaintiffs were exposed, the experts are able to conclude with a reasonable degree of medical probability both that there has been chromosomal damage and that such damage was caused by the radiation.[293]

Therefore, the court denied the motion for summary judgment and gave the plaintiff an opportunity to prove his injury in court through the use of expert witnesses.

Statutes of limitation, as applied to radon cases, are not as complex as they might initially seem. In suits to recover monies expended on remedial radon measures, the homebuyers would face a four year statute of limitations. This statute begins to run when the

287. Levy, *Radiation Litigation — The Emerging Tort Field*, 25 TRIAL LAW. J. 568, 578-79 (1982). *But see* Garrett v. Raytheon, 368 So.2d 516 (Ala. 1979) (holding that the limitations period begins to run when exposure occurs).

288. Murphy, *supra* note 25.

289. 586 F. Supp. 14 (D.C. Colo. 1984) (cited in Galen, *supra* note 4).

290. *Id.* at 15.

291. *Id.*

292. *Id.* at 17.

293. *Id.* at 17-18.

home owner discovers or should reasonably have discovered that a radon problem exists. In personal injury actions, the statutory period is two years. This period commences when the plaintiff discovers his radon exposure. The plaintiff need not and cannot wait until a cancer develops. Rather, the buyer should bring an immediate action based on his present injury of an increased risk of cancer.

VI. Conclusion

With the increased awareness of the radon problem and the hazards of radon exposure, Pennsylvania homeowners will find the law a fertile ground for shifting the cost of remedial measures. This liability, however, has reasonable limits. While the buyer of a new radon contaminated home should have a cause of action under an implied warranty theory against the builder-vendor of that home, such liability will not extend to the sale of older homes by private individuals. A person not in the market of selling homes should not be held liable for radon contamination unless the seller misrepresents the condition of the home or fails to disclose a known radon problem.

A specific radon disclaimer clause, which shifts the risk of radon contamination to the buyer, would strongly mitigate a finding that radon contamination falls within the builder-vendor's implied warranty. Additionally, a reasonable application of the relevant statutes of limitation would prevent stale claims from accruing against the builder-vendor.

One broad theme runs through this analysis. Namely, radon gas exposure should not be treated differently than other natural problems which effect the value of real estate, such as soil instability and flooding problems. Although radon gas is a new and hazardous specter, the public policy reasons for placing liability on builder-vendors, landlords and fraudulent sellers are as relevant with radon contamination as they are with other defective home conditions. Additionally, because radon is a potential health threat of great proportions, placing the risk of liability on these parties would promote detection and remedial action before residents suffer long term irreversible damage to their health.

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